(7)

No. 02-1343

FILED
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OFFICE OF THE CLERK

In The
Supreme Court of the United States

ENGINE MANUFACTURERS ASSOCIATION AND WESTERN STATES PETROLEUM ASSOCIATION,

Petitioners,

v.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, ET AL.,

Respondents.

On Writ Of Certiorari To The United States Court Of Appeals For The Ninth Circuit

JOINT APPENDIX

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Petition For Certiorari Filed On March 11, 2003
Certiorari Granted on June 9, 2003

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The following opinions and orders have been omitted in printing this Joint Appendix because they appear on the following pages in the Appendix to the Petition for Certiorari:

Opinion and Order of the United States District Court for the Central District of California, dated August 22, 2001 ..... Pet. App. 3a

Opinion and Order of the United States Court of Appeals for the Ninth Circuit, dated October 24, 2002 ..... Pet. App. 1a

Opinion of the United States Court of Appeals for the Ninth Circuit denying petition for rehearing and rehearing *en banc*, dated December 11, 2002 ..... Pet. App. 28a

RELEVANT DOCKET ENTRIES

Ninth Circuit

01-56688

9/28/01	DOCKETED CAUSE AND ENTERED APPEARANCES OF COUNSEL. CADS SENT (Y/N): Y. setting schedule as follows: CADS is past due; CADS must be filed no later than 10/5/01; appellant's opening brief is due 11/7/01; appellees' brief is due 12/7/01,, ; appellants' reply brief is due 12/21/01; [01-56688] (pg) [01-56688]
12/26/01	Filed motion of Appellant and deputy clerk order: (Deputy Clerk: cb) granting motion & order to extend time to file appellant's opening brief. Aplt's br may be enlarged pursuant to 9th CR 28-4. [4326544-1] appellants' opening brief due 1/28/02; appellees' brief due 3/20/02. Aples' joint br size may also be enlarged . . . the opt reply br is due 14 days from service . . . (Motion recvd 12/19/01) [01-56685, 01-56688] (gar) [01-56685 01-56688]
1/29/02	Filed original and 15 copies Appellant Engine Manufacturers and Western States Petro's opening brief (Informal: n) 44 pages and five excerpts of record in 1volumes; served on 1/28/02 [01-56685, 01-56688] (gar) [01-56685 01-56688]
2/1/02	Filed original and 15 copies Amer Auto Leasing and Natl Assoc of Fleet Admin's joint amicus brief of 31 pages; served on 1/31/02. BRIEF FILED WITH CONSENT OF ALL PARTIES [01-56685, 01-56688] (gar) [01-56685 01-56688]
2/4/02	Received Amicus Alliance Auto Man brief in 15 copies of 29 pages in support of aplts; deficient; motion pending w/PROMO; served on 2/2/02

RECORDS FOR MERITS PANEL per order of 2/12/02 [01-56685, 01-56688] (gar) [01-56685 01-56688]

2/5/02 Received Amicus American Road & Tra brief in 15 copies of 28 pages; deficient: mtn pending w/PROMO;served on 2/4/02 RECORDS FOR MERITS PANEL per order of 2/12/02 [01-56685, 01-56688] (gar) [01-56685 01-56688]

4/22/02 Received orig. 15 copies Natural Resources' brief of 61 pages; served on 4/19/02 deficient; excerpts oversized, no Statmnt Rel cases. Notified counsel. [01-56685, 01-56688] (gar) [01-56685 01-56688]

4/22/02 Filed original and 15 copies Appellee South Coast Air Qual, William A. Burke, Norma J. Glover, Michael D. Antonovich, Hal Bernson, Jane W. Carney's brief, 72 pages, 5 suppl exc in 1 vol; served on 4/19/02 minor defcy: no original included Notified counsel. [01-56685, 01-56688] record on appeal due 5/9/02 in 01-56685, in 01-56685; (gar) [01-56685 01-56688]

4/25/02 Received orig and 15 copies Amicus Curiae Sunline Transit Agency and ENRG, Inc.'s brf of 23 pages in supp of Aples; served on 4/24/02 (**RECORDS/MERITS PANEL per 2/12/02 order**) [01-56685, 01-56688] (gail) [01-56685 01-56688]

4/26/02 Filed notice of joint reply brief by Appellant Engine Manufacturers and Western States Petro in Briefing schedule is now as follows: reply brief has an extra 21 days added to due date. Five additional pages are authorized for reply brief only. (CASEFILE) [01-56685, 01-56688] (gar) [01-56685 01-56688]

4/29/02 Received Amicus Nat Gas Vehicle amicus brief in 15 copies of 20 pages; deficient: RECORDS

FOR MERITS PANEL PER 2/12/02 ORDER, served 4/26/02 01-56685, 01-56688] (gar) [01-56685 01-56688]

4/29/02 Filed original and 15 copies States of CA and NY amicus brief of 34 pages ;served on 4/26/02 [01-56685, 01-56688] (gar) [01-56685 01-56688]

4/30/02 Filed original and 15 copies appellee Natural Resources' 61 pages brief, 5 suppl Exc.in 2 vols: ; served on 4/19/02 [01-56685, 01-56688] (gar) [01-56685 01-56688]

6/24/02 Filed original and 15 copies Engine Manufacturers and Western States Petro reply brief, (Informal: n) 33 pages; served on 6/21/02 [01-56685, 01-56688] (gar) [01-56685 01-56688]

10/11/02 ARGUED AND SUBMITTED TO Alfred T. GOODWIN, Pamela A. RYMER, M. M. McKEOWN [01-56685, 01-56688] (bg) [01-56685 01-56688]

10/24/02 Order filed AFFIRMED (Terminated on the Merits after Oral Hearing; Affirmed; Written, Unsigned, Published. Alfred T. GOODWIN, Pamela A. RYMER, M. M. McKEOWN) [01-56685, 01-56688] (gar) [01-56685 01-56688]

11/13/02 [4579293] Filed original and 50 copies Appellant Engine Manufacturers Western States Petro in petition for panel rehearing and petition for rehearing en banc 8 p.pages, served on 11/12/02 PANEL AND ALL ACTIVE JUDGES [01-56685, 01-56688] (gar) [01-56685 01-56688]

12/11/02 Filed order (Alfred T. GOODWIN, Pamela A. RYMER, M. M. McKEOWN,): denying petition for rehearing and enbanc rehearing [4579293-1] [01-56685, 01-56688] (gar) [01-56685 01-56688]

12/19/02 MANDATE ISSUED [01-56685, 01-56688] (gar) [01-56685 01-56688]

3/21/03 Received notice from Supreme Court: petition for certiorari filed Supreme Court No. 02-1343 filed on 3/11/03. (CASEFILE) [01-56688, 01-56685] (ru) [01-56685 01-56688]

6/13/03 Received notice from Supreme Court, petition for certiorari GRANTED on 6/9/03. Supreme Court No. 02-1343 (CASEFILE) (ru) [01-56685 01-56688]

U.S. District Court

00-CV-9065

8/24/00 1 COMPLAINT filed referred to Discovery Brian Q. Robbins (pc) [Entry date 08/28/00] [Edit date 08/30/00]

10/23/00 8 ANSWER filed by defendants South Coast Air, Norma Glover, Michael D Antonovich, Hal Bernson, Jane W Carney, Cynthia P Coad, Beatrice J S Lapistokirtley, Ronald O Loveridge, Jon D Mikels, Leonard Paulitz, Cynthia Verdugo-Peralta, S Roy Wilson, Barry R Wallerstein to complaint [1-1] (jp) [Entry date 10/25/00]

11/21/00 11 FIRST AMENDED COMPLAINT [1-1] for declaratory & injunctive relief by plaintiff Engine Manufacturers. Summons not issued (rrey) [Entry date 11/22/00]

12/18/00 12 STIPULATION and ORDER by Judge Florence-Marie Cooper allowing intervention by intervenors Natural Resources, Coalition for Clean, Comm For A Bet Env, Plan & Consv League, Sierra Club (rrey) [Entry date 12/21/00]

12/21/00 13 ANSWER filed by defendants South Coast Air Quality Management District, & District defendants William A Burke, Norma J Glover, Michael D Antonovich, Hal Bernson, Jane W Carney, Cynthia P Coad, Beatrice J S Lapistokirtley, Ronald O Loveridge, Jon D Mikels, Leonard Paulitz, Cynthia Verdugo-Peralta, S Roy Wilson, Barry R Wallerstein to 1st amended complaint [11-1] (rrey) [Entry date 12/26/00]

12/21/00 15 ANSWER filed by intervenor defendant Coalition for Clean, intervenor defendant

Natural Resources, intervenor defendant Comm for Better, intervenor defendant Planning & Conservat, intervenor defendant Sierra Club to 1st amended complaint [11-1] (jag) [Entry date 12/27/00]

1/17/01 19 STIPULATION and ORDER by Judge Florence-Marie Cooper for leave to interven [sic] by Western States Association (see doc for fur details) (rrey) [Entry date 01/18/01]

1/17/01 20 INTERVENOR'S COMPLAINT by intervenor plaintiff Western States Petroleum Association (rrey) [Entry date 01/18/01] [Edit date 01/18/01]

2/13/01 23 ANSWER filed by intervenor defendants Natural Resources Defense Council Inc, Coalition For Clean Air Inc, Communities for a Better Environment, Planning & Conservation League, Sierra Club to complaint-in-intervention [20-1] (rrey) [Entry date 02/14/01]

2/13/01 24 ANSWER filed by defendants South Coast Air, William A Burke, Norma J Glover, Michael D Antonovich, Hal Bernson, Jane W Carney, Cynthia P Coad, Beatrice J S Lapistokirtley, Ronald O Loveridge, Jon D Mikels, Leonard Paulitz, Cynthia Verdugo-Peralta, S Roy Wilson, Barry R Wallerstein to complaint-in-intervention [20-1] (rrey) [Entry date 02/15/01]

3/23/01 28 NOTICE OF MOTION AND MOTION by defendants for summary judgment purs to FRCP 56(b); motion hearing set for 10:00 5/21/01; Lodged Stmt of UFCL & propsd Jgmt (jp) [Entry date 03/26/01]

3/23/01 29 MEMORANDUM OF POINTS & AUTH by defendants in supt of motion for summary judgment [28-1] (jp) [Entry date 03/26/01]

3/23/01 30 APPENDIX OF EXHIBITS by defendants to motion for summary judgment [28-1] (jp) [Entry date 03/26/01]

3/23/01 31 DECLARATION of LARRY IRWIN by defendants in suppt of motion for summary judgment [28-1] (jp) [Entry date 03/26/01]

3/23/01 32 NOTICE OF MOTION AND MOTION by plaintiff Engine Manufacturers Assoc for summary judgment on count one (1) thru six (6) of Ema's 1st A/C for declatory & injunctive relief; motion hearing set for 10:00 5/21/01; Lodged Propsd Ord & Stmt of U/F (jp) [Entry date 03/26/01]

3/23/01 33 MEMORANDUM OF POINTS & AUTHORITIES by plaintiff Engine Manufacturers in suppt of motion for summary judgment on count one (1) through six (6) of Ema's 1st A/C for declatory & injunctive relief [32-1] (jp) [Entry date 03/26/01]

3/23/01 34 DECLARATION of JED R. MANDEL by plaintiff Engine Manufacturers in suppt of motion for summary judgment on count one (1) thru six (6) of Ema's 1st A/C for declatory & injunctive relief [32-1] (jp) [Entry date 03/26/01]

3/23/01 35 DECLARATION of JOHN W. DUERR by plaintiff Engine Manufacturers in suppt of motion for summary judgment on count one (1) thru six (6) of Ema's 1st A/C for declatory & injunctive relief [32-1] (jp) [Entry date 03/26/01]

3/23/01 36 DECLARATION of STEVEN R. BUTLER by plaintiff Engine Manufacturers in suppt of motion for summary judgment on count one (1) thru six (6) of Ema's 1st A/C for declatory

& injunctive relief [32-1] (jp) [Entry date 03/26/01]

3/23/01 37 DECLARATION of EUGENE M. SWEENEY by plaintiff Engine Manufacturers in suppt of motion for summary judgment on count one (1) thru six (6) of Ema's 1st A/C for declatory & injunctive relief [32-1] (jp) [Entry date 03/26/01]

3/23/01 38 DECLARATION of JEFFREY A. MARSEE by plaintiff Engine Manufacturers in suppt of motion for summary judgment on count one (1) thru six (6) of Ema's 1st A/C for declatory & injunctive relief [32-1] (jp) [Entry date 03/26/01]

3/23/01 39 JOINDER by intervenor defendants in defendant South Coast Notice of motion and motion for summary judgment [28-1], stmt of uncontroverted facts & conclusions of law in suppt of mot for S/J, etc. (jp) [Entry date 03/27/01]

3/23/01 40 APPENDIX OF EXHIBITS by intervenor defendants to memorandum of points & auth of in suppt of motion for summary judgment [28-1] (jp) [Entry date 03/27/01]

3/23/01 41 MEMORANDUM OF POINTS & AUTH by intervenor defendants in suppt of motion for summary judgment [28-1] (jp) [Entry date 03/27/01]

3/23/01 42 NOTICE OF MOTION AND MOTION by intervenor plaintiff Western States for summary judgment as to all dfts named in the cmp in intervention; Decls of Douglas Henderson, Brian E. Wall; motion hearing set for 10:00 5/21/01; Lodged propsd stmt & propsd jgm (jp) [Entry date 03/27/01]

4/5/01 44 Appendix of exhibit 1 (revised) by intervenor to memo of points and authorities of environmental defendants' in support of motion for summary judgment [28-1] (bp) [Entry date 04/06/01]

4/20/01 46 Memorandum by plaintiff Engine Manufacturers in response and in opposition to motion for summary judgment [28-1] (bp) [Entry date 04/23/01]

4/20/01 47 Memorandum by plaintiff Engine Manufacturers in reponse [sic] to the memorandum submitted in support of the motion for summary judgment [28-1] (bp) [Entry date 04/23/01]

4/20/01 48 MEMORANDUM of points and authorities filed by intervenor plaintiff Western States Pet in opposition to motion for summary judgment [28-1] (bp) [Entry date 04/23/01]

4/20/01 49 Objections to the evidence by intervenor plaintiff Western States Pet in the motion for summary judgment [28-1] (bp) [Entry date 04/23/01]

4/20/01 50 Statement of genuine issues by intervenor plaintiff Western States Pet in response to motion for summary judgment [28-1] (bp) [Entry date 04/23/01]

4/20/01 51 DECLARATION of Leslie Krinsk by defendant South Coast Air in support of motion for summary judgment [28-1] (bp) [Entry date 04/23/01]

4/20/01 52 DECLARATION of David R. Coel by defendant South Coast Air in support of motion for summary judgment [28-1] (bp) [Entry date 04/23/01]

4/20/01 53 Statement of genuine issues by defendant South Coast air in opposition to Plf-in-intervention Western States statement of UFCL motion for summary judgment as to all dfts named in the cmp in intervention [42-1] (bp) [Entry date 04/23/01]

4/20/01 54 Statement of genuine issues by defendant South Coast Air in opposition to plf Engine Manufacurer's [sic] statement of UFCL motion for summary judgment on count one (1) through six (6) of Ema's 1st A/C for declatory & injunctive relief [32-1] (bp) [Entry date 04/23/01]

4/20/01 55 MEMORANDUM of points and authorities filed by defendant South Coast Air in opposition to motion for summary judgment as to all dfts named in the cmp in intervention [42-1] (bp) [Entry date 04/23/01]

4/20/01 56 MEMORANDUM of points and authorities filed by defendant South Coast Air in opposition to motion for summary judgment on count one (1) thru six of Ema's 1st A/C for declatory & injunctive relief [32-1] (bp) [Entry date 04/23/01]

4/20/01 57 OPPOSITION by intervenor defendant Natural Resources to motion for summary judgment as to all dfts named in the cmp in intervention [42-1] (bp) [Entry date 04/24/01]

4/20/01 58 OPPOSITION by intervenor Natural Resources to motion for summary judgment on count one (1) thru six (6) of Ema's 1st A/C for declatory & injunctive relief [32-1] (bp) [Entry date 04/24/01]

4/20/01 59 Amicus Curiae Brief by State of CA in opposition to motion for summary judgment

as to all dfts named in the cmp in intervention [42-1] (bp) [Entry date 04/24/01]

4/20/01 60 Statement of UFCL by intervenor Coalition for Clean in opposition to motion for summary judgment on count one (1) thru six (6) Ema's 1st A/C for declatory & injunctive relief [32-1] (bp) [Entry date 04/26/01]

5/11/01 61 REPLY Memorandum by plaintiff Engine Manufacturers in support of motion for summary judgment on count one (1) thru six (6) Ema's 1st A/C for declatory & injunctive relief [32-1] (bp) [Entry date 05/14/01]

5/11/01 62 RESPONSE to opposition memorandum of plaintiff by defendant South Coast Air (bp) [Entry date 05/14/01]

5/11/01 64 REPLY to the opposition briefs of plaintiff Engine Manufactureres [sic] and the opposition brief of plaintiff-in-intervention Western States Petroleum Association by intervenor Natural Resources (bp) [Entry date 05/16/01]

5/11/01 65 RESPONSE to plaintiff-in-intervention Western State Petroleum's ojbections [sic] to evidence by intervenor Natural Resources (bp) [Entry date 05/16/01]

5/11/01 67 REPLY memorandum of points and authorities by intervenor plaintiff Western States Pet in support of motion for summary judgment as to all dfts in the cmp in intervention [42-1] (bp) [Entry date 05/16/01]

5/14/01 66 NOTICE of lodging of administrative record by defendant South Coast Air (bp) [Entry date 05/16/01]

6/25/01 71 MINUTES: Plaintiff's motion for summary judgment on counts 1-6 on first amended

complaint; defendant SCA1MD's motion for summary judgment; Intervenor plaintiff Western States' motion for summary judgment. The court hears oral argument in the above-referenced motions. The court indicates it will abide by its tentative ruling. The court's final order will issue by Judge Florence-Marie Cooper CR: N/A (bp) [Entry date 06/26/01]

7/3/01 72 RECEIPT OF TRANSCRIPT of proceedings for the following date(s): 6/25/01 CR: Pat Cuneo (dl) [Entry date 07/09/01]

7/3/01 -- TRANSCRIPT filed for proceedings held on 6/25/01 (dl) [Entry date 07/09/01]

7/25/01 75 STIPULATION and ORDER that count seven as set forth in EMA's first amended complaint filed in this action on 11/21/00 is hereby dismissed with prejudice by Judge Florence-Marie Cooper (sent) (bp) [Entry date 07/26/01]

8/22/01 76 JUDGMENT AND ORDER: by Judge Florence-Marie Cooper. It is hereby Ordered and Adjudged that: Defendant South Coast Air Quality Management District's motion for summary judgment is granted. The Fleet rules adopted by the South Coast Air Quality Managment [sic] District that are at issue in this litigation (rules 1191, 1192, 1193, 1994, 1186.1 and 1196) were lawfully enacted and are lawful and valid in all respects. The motion for summary judgment by defendants-in-intervention is Granted. Plaintiff's motion for summary judgment is Denied. Plaintiff-in-intervention's motion for summary jdugment [sic] is Denied. Plaintiff and Plaintiff-in-intervention shall take nothing by this

action. The action is dismissed on the merits. Defendants and Defendants-in-intervention shall recover their costs (ENT 8/23/01) (bp) [Entry date 08/23/01]

8/22/01 77 ORDER re: cross motion for summary judgment by Judge Florence-Marie Cooper. The court concludes that the Fleet Rules are not preempted by 209(a) of the Clean Air Act and are a valid exercise of the SCAQMD's authority. Section 177 does not apply to the District's Fleet Rules. Plaintiffs' motions for summary judgment as to counts one through six of their complaints are denied. Defendants' motions for summary judgment are granted (ENT 8/23/01) (bp) [Entry date 08/23/01]

9/13/01 78 NOTICE OF APPEAL by plaintiff Engine Manufacturers Association ("EMA") to 9th C/A from Dist. Court Jgm & Ord fld 8/22/01 & ent 8/23/01 [76-1] (cc: Elizabeth L. MacDowell; Jed R. Mandel; Barbara Baird; Daniel P. Selmi; Fran M. Layton; Gail Ruderman Feuer; Teresa A. Beaudet; Susan L. Durbin) Fee: Paid (weap) [Entry date 09/14/01]

9/18/01 80 NOTICE OF APPEAL by intervenor plaintiff Western States Petroleum Association to 9th C/A from Dist. Court ord ent 8/23/01 [77-1], jgm & ord ent 8/23/01 [76-1] (cc: Mayer, Brown & Platt;Neal Geber & Eisenberg; Benshoof, Rochefort, Rubalcava & MacCuish;Barbara Baird & Kurt R. Wiese; Daniel P. Selmi;Shute Mahaly & Weinberger; Gail Ruderman Feuer & Julie Masters;Susan Durbin) Fee: Billed (app) [Entry date 09/18/01]

9/27/01 83 CERTIFICATE of Record Transmitted to USCA (cc: all parties) (dl) [Entry date 09/27/01]

10/29/01 88 ORDER FROM USCA: Crt is in receipt of parties' joint mot to consolidate App #s 01-56685 & 01-56688. Apps ord consol. Stip proposes new time sched ord that extends due dates beyond those established_by C/A under FRAP 31(a). Crt declines to accept parties proposed sched. Brief sched for consol cases is set. All parties on a side are encouraged to join in single brief to greatest extent possible. If good cause is shown, Crt will entertain req for ext of time to file brief under 9th CR 31-2.2. (01-56685; 01-56688) (wdc) [Entry date 11/05/01]

11/1/01 87 CERTIFICATE of Record Transmitted to USCA # 01-56685 (cc: all parties) (dl) [Entry date 11/01/01]

12-26-02 -- LODGED CC 9th CCA JUDGMENT judgment of said District Court affirmed. (01-56685, 01-56688) (FWD TO CRD) (pjap) [Entry date 01/06/03]

12/27/02 96 CERTIFIED COPY of Appellate Court Order: affirming the decision of the District Court [80-1], affirming the decision of the District Court [781] (bp) [Entry date 12/30/02]

12/27/02 97 MANDATE from Circuit Court of Appeals filing and spreading the affirming of the decisions from the said District Court. (bp) [Entry date 12/30/02]

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENGINE MANUFACTURERS ASSOCIATION,

Plaintiff,

v.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al.,

Defendants.

NATURAL RESOURCES DEFENSE COUNCIL, INC., COALITION FOR CLEAN AIR, INC., COMMUNITIES FOR A BETTER ENVIRONMENT, INC., PLANNING AND CONSERVATION LEAGUE, and SIERRA CLUB,

Intervenors.

WESTERN STATES PETROLEUM ASSOCIATION,

Intervenor.

Case No. 00-09065 FMC (BQRX)

The following eleven items were entered as exhibits in this court.

South Coast Air Quality Management District

(Adopted August 18, 2000)

Rule 1186.1 Less-Polluting Sweepers

(a) Purpose

To reduce air toxic and criteria pollutant emissions, this rule requires certain public and private sweeper fleet operators to acquire alternative-fuel or otherwise less-polluting sweepers when purchasing or leasing these vehicles for sweeping operations undertaken by or for governments or governmental agencies in the jurisdiction of the South Coast Air Quality Management District (District).

(b) Applicability

(1) This rule applies to any federal, state, county, city or governmental department or agency, any special district such as water, air, sanitation, transit, and school districts, or private individual firm, association, franchise, contractor, user or owner who provides sweeping services to a governmental agency that owns or leases 15 or more vehicles, including passenger cars, light-duty trucks, and medium- and heavy-duty on-road vehicles, but excluding those vehicles exempt as defined by Rule 1191 paragraph (f)(1).

(2) Sweepers having a gross vehicle weight of 14,000 pounds or more are subject to this rule.

(c) Definitions

For purposes of this rule, the following definitions shall apply:

(1) AFFECTED GOVERNMENTAL AGENCY means any governmental agency in the District's jurisdiction that owns or leases 15 or more vehicles, including passenger cars, light-duty trucks, and medium- and heavy-duty on-road vehicles, excluding those exempt as defined by Rule 1191 paragraph (f)(1).

(2) ALTERNATIVE-FUEL SWEEPER means a sweeper with engine(s) that use compressed or liquefied natural gas, liquefied petroleum gas (propane), methanol, electricity, or fuel cells. Hybrid-electric and dual-fuel technologies that use diesel fuel are not considered alternative-fuel technologies for the purposes of this rule.

(3) APPROVED CONTROL DEVICE(S) is a California Air Resources Board (CARB)-certified exhaust control device(s) that reduces particulates and possibly other precursor emissions. To be considered fitted with approved control device(s), all diesel exhaust from the sweeper, including the auxiliary engine (if applicable) must be vented through such a device(s) that have been certified by CARB at the time of vehicle purchase.

(4) FLEET OPERATOR is any federal, state, county, city, or governmental department or agency, any special district such as water, air, sanitation, transit, and school districts, or private individual firm, association, franchise, contractor, user or owner who provides sweeping services to a governmental agency that owns or leases 15 or more vehicles, including passenger cars, light-duty trucks, and medium- and heavy-duty on-road vehicles, excluding those exempt as defined by Rule 1191 paragraph (f)(1).

(5) GOVERNMENTAL AGENCY include [sic] any federal, state, regional, county, city, or governmental department and agency, and any special district such as water, air, sanitation, transit, and school districts. See AFFECTED GOVERNMENTAL AGENCY.

(6) LOW-SULFUR DIESEL FUEL means diesel fuel that has a maximum sulfur content of 15 parts per million (ppm). The use of low-sulfur diesel fuel improves the performance of and may be necessary for the use of advanced exhaust control devices.

(7) PURCHASE OR LEASE means that a purchase or lease contract has been signed by both parties for a sweeper to be delivered within 1 year of the purchase or lease contract date, which is the date the contract is signed by both parties.

(8) SWEEPER means any heavy-duty vehicle with a gross vehicle weight of 14,000 pounds or more that is permitted to operate on public roads through California Department of Motor Vehicle registration or the federal government and used for the express purpose of removing material from paved surfaces, by mechanical means through the action of one or more brooms, or by suction through a vacuum or regenerative air system or any combination of the above.

(9) SWEEPING OPERATIONS means operations to remove material from paved surfaces using sweeper(s), as defined by this rule.

(d) Requirements

For Fleet Operators:

(1) Beginning July 1, 2002, a fleet operator shall meet the following conditions for each individual purchase or lease of a replacement or additional sweeper:

(A) Purchase or lease an alternative-fuel sweeper, OR

(B) Before July 1, 2004, if the fleet operator has an approved Technical Infeasibility Certification for this individual purchase or lease, as described in subdivision (e),

(i) purchase or lease a non-alternative fueled sweeper with all applicable approved control device(s), and

(ii) maintain the approved control device(s) per manufacturer's specifications, and

(iii) if using diesel fuel, fuel the sweeper with low-sulfur diesel fuel only, and

(iv) comply with Rule 1186 without invoking the exemption provision in Rule 1186 paragraph (i)(3), unless a demonstration is made to the Executive Officer that for solely technical reasons no certified sweeper, as defined in Rule 1186 paragraph (c)(2), is commercially available.

For Affected Governmental Agencies Contracting for Sweeping Services:

(2) Any affected governmental agency that signs a contract after July 1, 2002 for sweeping services must:

(A) Contract for sweeping services that use alternative-fuel sweeper(s), OR

(B) Solicit bids for sweeping operations using alternative-fuel sweepers and if no bids are submitted:

(i) Contract for non-alternative fueled sweeper(s) and ensure that the sweeper(s) are only fueled with low-sulfur diesel and outfitted with approved control device(s) that are installed and maintained per the manufacturer's specifications, and

(ii) Contract for sweeper(s) that comply with Rule 1186 without invoking the exemption provision in Rule 1186 paragraph (i)(3), unless a demonstration is made to the Executive Officer that for solely technical reasons no certified sweeper, as defined in Rule 1186 paragraph (c)(2), is commercially available.

(3) After January 1, 2003, any renewal or extension option of a contract is considered a new contract that must meet the requirements of paragraph (d)(2).

(e) Technical Infeasibility Certification Criteria and Procedures

(1) Six months prior to the date of purchase or lease of a replacement or additional sweeper, any fleet operator seeking to comply with subdivision (d) without purchasing or leasing an alternate-fuel sweeper [i.e., opting to comply with paragraph (d)(2)], shall demonstrate the technical infeasibility of complying with paragraph (d)(1) requirements by submitting a signed and dated Technical Infeasibility Certification Request to the Executive Officer and attest to the accuracy of all statements therein, that shall include:

(A) the name and address of the fleet operator; and

(B) current sweeper fleet composition, including make, model, and a complete description of the sweepers' dust suppression systems; and

(C) demonstration that no alternative-fuel engine and chassis configuration is commercially available from any manufacturer for sweeping operations conducted by the fleet operator (only technical reasons for choosing a given chassis configuration are acceptable), OR

(D) demonstration that a fueling station for alternative-fuel sweepers commercially available from any manufacturer for sweeping operations conducted by the fleet operator is not available within five miles of the vehicle storage or maintenance yards.

(2) Within 90 calendar days of receipt of a completed Technical Infeasibility Certification Request submitted pursuant to paragraph (e)(1), the Executive Officer will either approve or disapprove the Request, in writing.

(3) The Executive Officer shall disapprove a Technical Infeasibility Certification Request if it does not meet the requirements of paragraph (e)(1). If a Technical Infeasibility Certification Request is disapproved by the Executive Officer:

(A) The reasons for disapproval shall be given to the applicant in writing.

(B) Upon receipt of a notice of a disapproved Technical Infeasibility Certification Request, the fleet operator shall comply with paragraph (d)(1).

(C) The fleet operator may resubmit a Technical Infeasibility Certification Request at any time after receiving a disapproval notification, but must still comply with paragraph (d)(1) until such time as the Executive Officer approves a Technical Infeasibility Certification Request under paragraph (e)(1).

(4) A Technical Infeasibility Certification Request is subject to plan filing and evaluation fees as described in Rule 306.

(f) Exemptions

(1) The provisions of this rule shall not apply to fleets consisting of evaluation/test vehicles, provided by or operated by the vehicle manufacturer or manufacturer representative for testing or evaluation, exclusively.

(2) The provisions of subdivision (d) shall not apply to a sweeper purchase by a fleet operator that is solely dedicated to serving governmental agencies that are not subject to this rule, upon demonstration to and approval of the Executive Officer.

(g) Compliance Auditing and Enforcement

(1) At the request of the Executive Officer, the fleet operator shall provide the purchase, lease, or contract records for their sweepers to demonstrate compliance with subdivision (d).

(2) At the request of the Executive Officer, any fleet operator claiming an exemption under subdivision (f) shall supply proof that their sweeper or fleet is exempted from this rule.

(h) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances. In the event any of the exceptions to this rule is held by judicial order to invalid, the persons or circumstances covered by the exception shall instead be required to comply with the remainder of this rule.

South Coast Air Quality Management District

(Adopted June 16, 2000)

Rule 1191 – Clean On-Road Light- and Medium-Duty Public Fleet Vehicles

(a) Purpose

For public fleets operating in the South Coast Air Quality Management (District), this rule requires passenger car, light-duty truck, or medium-duty vehicle fleet operators to acquire low-emitting gasoline or alternative-fuel vehicles to reduce air toxic and criteria pollutants emissions when procuring or leasing these vehicles in the District.

(b) Applicability

This rule applies to all government agencies located in the District, including federal, state, regional, county and city government departments and agencies, and any special districts such as water, air, sanitation, transit, and school districts, with 15 or more non-exempt vehicles. This rule shall not apply to vehicles exempt under paragraph (f) including emergency vehicles operated by federal, state, or local law enforcement agencies; fire departments; or to paramedic and rescue vehicles; or heavy-duty on-road vehicles.

(c) Definitions

For purposes of this rule, the following definitions shall apply:

(1) ALTERNATIVE-FUELED VEHICLE means a vehicle or engine that is not powered by gasoline or diesel fuel and emits hydrocarbon, carbon monoxide,

or nitrogen oxides, on an individual basis at least equivalent to or lower than a ULEV based on ARB's certification data.

(2) EMERGENCY OR RESCUE VEHICLE means any vehicle defined in Section 165 of the California Vehicle Code and is equipped with red lights and sirens as defined in Sections 30, 25269, and 27002 of the California Vehicle Code.

(3) FLEET VEHICLES means any vehicles including passenger cars, light-duty trucks, and medium-duty on-road vehicles, owned or leased by a public fleet operator that totals 15 or more vehicles excluding vehicles exempt under paragraph (f).

(4) HEAVY-DUTY VEHICLE means any vehicle having a gross vehicle weight of at least 14,000 pounds.

(5) LIGHT-DUTY TRUCK means any motor vehicle rated at 6,000 pounds gross vehicle weight or less which is designed primarily for purposes of transportation of property or is a derivative of such vehicle, or available with special features enabling off-street or off-highway operation and use.

(6) LOW-EMISSION VEHICLE (LEV) means any vehicle certified to low-emission standards set forth in the "California Exhaust Emission Standards and Test Procedures for 1988-2000 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" and "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as incorporated by reference in Sections 1960.1(k) and 1961(d), Title 13, California Code of Regulations.

(7) LOW-EMITTING GASOLINE VEHICLE means a vehicle or engine that emits hydrocarbon, carbon

monoxide, or nitrogen oxides, on an individual basis at least equivalent to or lower than a LEV based on ARB's certification data.

(8) MEDIUM-DUTY VEHICLE means any vehicle having a gross vehicle weight of more than 6,000 pounds and less than 14,000 pounds.

(9) PASSENGER CAR means any vehicle designed primarily for transportation of persons and having a design capacity of twelve (12) persons or less.

(10) PUBLIC FLEET OPERATOR is a person who owns, leases, or operates fleet vehicles in the District. A person is federal, state, county and city government departments and agencies, and special districts.

(11) SPECIAL DISTRICT means any public agency that provides public services such as, but not limited to, sanitation, school, transit, air, and water districts.

(12) SUPER-ULTRA-LOW-EMISSION VEHICLE (SULEV) means any vehicle certified to super-ultra-low-emission standards set forth in the "California Exhaust Emission Standards and Test Procedures for 1988-2000 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" and "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as incorporated by reference in Sections 1960.1(k) and 1961(d), Title 13, California Code of Regulations.

(13) ULTRA-LOW-EMISSION VEHICLE (ULEV) means any vehicle certified to ultra-low-emission standards set forth in the "California Exhaust Emission Standards and Test Procedures for 1988-2000 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" and "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent

Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as incorporated by reference in Sections 1960.1(k) and 1961(d), Title 13, California Code of Regulations.

(14) VEHICLE means any self-propelled, motorized device that is permitted to operate on public roads through Department of Motor Vehicle registration or the federal government.

(15) ZERO-EMISSION VEHICLE (ZEV) means any vehicle certified to the zero-emission standards set forth in the "California Exhaust Emission Standards and Test Procedures for 2003 and Subsequent Model Zero-Emission Vehicles, and 2001 and Subsequent Model Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes," as incorporated by reference in Section 1962(d), Title 13, California Code of Regulations.

(d) List of Compliant Vehicles

Upon adoption of this rule and every six months thereafter, the Executive Officer shall publish a list of engines and associated vehicle models certified by California Air Resources Board (CARB) that fleet operators can choose from to comply with paragraph (e) of this rule.

(1) Upon the date of adoption of this rule, any light- or medium-duty vehicle that has been certified by the ARB that meets the LEV, ULEV, SULEV, or ZEV emission standards shall be included in the list.

(2) Upon determination by the Executive Officer that at least 50 percent of new light-duty vehicle sales in California consist of sales of ULEVs or equivalent vehicles, the list shall consist of any light-duty vehicle that has been certified by the CARB that meet the ULEV, SULEV, or ZEV emission standards.

(3) Upon determination by the Executive Officer that at least 50 percent of new medium-duty vehicle sales in California consist of sales of ULEVs or equivalent vehicles, the list shall consist of any medium-duty vehicle that has been certified by the CARB that meet the ULEV, SULEV, or ZEV emission standards.

(e) Fleet Requirements

(1) Beginning July 1, 2001, public fleet operators of 15 or more vehicles shall procure from the list published by the Executive Officer as required under paragraph (d), or otherwise certified by CARB as equivalent low-emitting gasoline or alternative-fuel vehicles, when adding or replacing vehicles to their vehicle fleet.

(2) Public fleet operators shall specify the purchase of compliant vehicles as part of their procurement bid request specifications.

(3) Notwithstanding subparagraphs (e)(1) and (e)(2) public fleet operators may purchase a gasoline- or diesel-fueled medium-duty vehicle that is not certified as LEV or cleaner if:

(A) The public fleet operator has sufficient prior purchases as of July 1, 2001 of alternative-fueled vehicles in the existing fleet that have been certified as ULEV, SULEV, or ZEV that would offset the emissions associated with the gasoline- or diesel-fueled vehicle as specified under subparagraph (e)(4); or

(B) The public fleet operator purchases concurrently with the medium-duty vehicle, alternative-fueled vehicles in sufficient quantities that have been certified as SULEV or ZEV that would

offset the emissions associated with the gasoline- or diesel-fueled vehicle as specified under subparagraph (e)(4).

(4) The following formulas shall be used for the purpose of offsetting the emissions associated with the purchase of a gasoline- or diesel-fueled vehicle or engine pursuant to subparagraph (e)(3):

One (1) gasoline- or diesel-fueled medium-duty vehicle or engine is equivalent to:

One (1) alternative-fueled light- or medium-duty ZEV or

Two (2) alternative-fueled light- or medium-duty SULEV or

Ten (10) alternative-fueled light-duty ULEV or

Three (3) alternative-fueled medium-duty ULEV

(5) Public fleet operators may purchase used vehicles that are not certified as LEV or cleaner if the used vehicles are converted to run at LEV or cleaner levels through the use of CARB certified conversion kits.

(f) Exemptions

The provisions of this rule shall not apply to the following:

(1) Emergency or rescue vehicles operated by local, state, and federal law enforcement agencies, police and sheriffs department, fire department, hospital, medical or paramedic facility, and used for responding to situations where potential threats to life or property exist, including but not limited to fire, ambulance calls, or life-saving calls.

(2) Vehicles used by law enforcement agencies for the purpose of surveillance or undercover operations.

(3) Heavy-duty on-road vehicles.

(4) Fleets consisting of evaluation/test vehicles, provided or operated by vehicle manufacturers for testing or evaluation, exclusively.

(5) Privately owned or operated light- or medium-duty fleets that provide contract services to public agency.

(6) Signed contract agreements as of the date of adoption of this rule for the purchase or lease of new light- or medium-duty vehicles.

(7) Non-passenger car military fleet vehicles.

(8) Upon demonstration to the Executive Officer, medium-duty vehicles for which LEV or cleaner engine and chassis configuration is not available commercially and the operator cannot make use of subparagraph (e)(3).

(g) Compliance Auditing and Enforcement

(1) The fleet operator shall provide at the request of the District any files and/or records created to comply with subdivision (e) including fleet-specific purchase information, such as a list of official DMV registrations, and manufacturer, model-year, model, engine family number, and fuel type of each fleet vehicle. The fleet operator shall keep all required records for a minimum of two years.

(2) Any fleet operator seeking an exemption under subdivision (f) shall supply proof that their vehicle or fleet is exempted from this rule when requested by the District.

(h) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances. In the event any of the exceptions to this rule is held by judicial order to be invalid, the persons or circumstances covered by the exception shall instead be required to comply with the remainder of this rule.

ATTACHMENT 1
List of Certified Engines Qualifying Under Paragraph (e)

MODEL YEAR 2000 - PASSENGER CARS

(This attachment will be updated by January 1, 2001)

Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
AUDI	Gaso	DED	YADXV02.8334	A4/A4 AVANT, A4, A4 AVANT, PASSAT, PASSAT VARIANT
AUDI	Gaso	DED	YADXV01.8332	A4, A4 QUATTRO, PASSAT, PASSAT WAGON, A4 WAGON QUATTRO
BMW	Gaso	DED	YBMXV02.8LEV	528i, 528iA
BMW	Gaso	DED	YBMXV04.4LEV	740i, 740i Sport, 740iL, 740iL Protection
BMW	Gaso	DED	YBMXV05.4LEV	750iL, 750iL PROTECTION
CHRYSLER/DODGE	Gaso	DED	YCRXV0148V30	BREEZE, CIRRUS, STRATUS
DODGE/PLYMOUTH	Gaso	DED	YCRXV0122V30	NEON
CHRYSLER/DODGE	Gaso	DED	YCRXV0165V30	CONCORDE, INTREPID
DODGE/PLYMOUTH	Gaso	DED	YCRXV0122V31	BREEZE, STRATUS
CHRYSLER/DODGE	Gaso	DED	YCRXV0215V30	300 M, CONDORDE LXI, INTREPID, INTREPID R/T, LHS
DAEWOO	Gaso	DED	XDWXV02.2D02	NUBIRA 2.0-NB, HB, WGN
DAEWOO	Gaso	DED	XDWXV01.6D02	LANOS 1.6-HB AND NB
DAEWOO	Gaso	DED	XDWXV01.6D02	LANOS 1.6-NB
FORD	Gaso	FF	YFMXV03.0VF9	TAURUS FFV ETHANOL
LINCOLN	Gaso	DED	YFMXV03.9VF5	LS8
FORD	Gaso	DED	YFMXV03.0VF2	LINCOLN LS6
FORD, MERCURY	Gaso	DED	YFMXV03.0VF5	TAURUS, TAURUS WAGON, SABLE, SABLE WAGON
FORD	Gaso	DED	YFMXV02.0VF5	ESCORT ZX2, ESCORT S/R
FORD, MERCURY	Gaso	DED	YFMXV03.0VF3	TAURUS, TAURUS WAGON, SABLE, SABLE WAGON
FORD	Gaso	DED	YFMXV03.8VF5	MUSTANG
FORD	Gaso	DED	YFMXV02.0VF3	FOCUS SDN/WGN
FORD, MERCURY, LINCOLN	Gaso	DED	YFMXV04.6VFR	CROWN VICTORIA, GRAND MARQUIS, TOWN CAR
FORD	Gaso	DED	YFMXV02.0VF2	FOCUS SDN/WGN
SUBARU	Gaso	DED	YFJXV02.5JEH	LEGACY, FORESTER, IMPREZA
CHERVOLET, OLDSMOBILE, PONTIAC	Gaso	DED	YGMXV03.8043	MALIBU

DED= Dedicated; Dual Fuel; FF= Flexible Fuel; Elec = Electric; CNG = Compressed Natural Gas; Gaso = Gasoline. N/A = Not Applicable

Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
SATURN	Gaso	DED	YGMXV01.9002	SC/SL/SW
CADILLAC	Gaso	DED	YGMXV03.0061	CATERA
CHEVROLET	Gaso	DED	YGMXV05.7084	CORVETTE (A4,M6)
OLDSMOBILE	Gaso	DED	YGMXV04.6066	AURORA
CHEVROLET,PONTIAC	Gaso	DED	YGMXV05.7083	CAMARO, FIREBIRD/TRANS AM
OLDSMOBILE	Gaso	DED	YGMXV03.5064	AURORA
CHEVROLET, PONTIAC	Gaso	DED	YGMXV02.4022	SUNFIRE(AUTO), CAVALIER(AUTO)
HONDA	Gaso	DED	YHNXV02.0MA3	S2000
HONDA	Gaso	DED	YHNXV01.6CA3	CIVIC COUPE DX/SE, CIVIC SEDAN DX/LX/EX/DX-V, CIVIC HB CX/DX
HONDA	Gaso	DED	YHNXV03.0FA3	ACCORD EX V6 COUPE/SEDAN, LX V6 COUPE/SEDAN
ACURA	Gaso	DED	YHNXV03.2AA3	NSX (AUTO)
HONDA	Gaso	DED	YHNXV02.3PA3	ACCORD DX SEDAN
HONDA	Gaso	DED	YHNXV01.6TA3	CIVIC COUPE EX / Si, CIVIC SEDAN EX, 1.6EL RS/TS, 1.6EL RS/TS/XS
HONDA	Gaso	DED	YHNXV02.3PF2	ACCORD LX/EX COUPE, ACCORD LX/EX SEDAN
HONDA	Gaso	DED	YHNXV03.5YA3	3.5RL
HYUNDAI	Gaso	DED	YHYXV01.5G3S	ACCENT
HUYNDAI	Gaso	DED	YHYXV02.0G3S	ELANTRA SEDAN/ WAGON, TRIBURON COUPE
CHEVROLET	Gaso	DF	YTJXV02.2022	CAVALIER
CHEVROLET	CNG	DF	YTJXV02.2022	CAVALIER
JAGUAR	Gaso	DED	YJCXV04.0BN4	4-DR SEDANS, 2-DR SPORTS, CONVERTIBLE
KIA	Gaso	DED	YKMXV01.8A03	SEPHIA
MAZDA	Gaso	DED	YTKXV01.8VFM	PROTÉGÉ
MAZDA	Gaso	DED	YTKXV01.8VFN	MX-5 MIATA
MERCEDES-BENZ	Gaso	DED	YMBXV05.0GNB	S430, E430, SL500, S500
MERCEDES-BENZ	Gaso	DED	YMBXV05.5GNB	E55 AMG
MERCEDES-BENZ	Gaso	DED	YMBXV05.0GNB	S 430, E430(RWD), E430(4WD-FT), SL500, S500
MERCEDES-BENZ	Gaso	DED	YMBXV03.2GNB	C 280, CLK320
MITSUBISHI	Gaso	DED	YMTXV01.8GNG	MIRAGE
MITSUBISHI	Gaso	DED	YMTXV01.5GND	MIRAGE
MITSUBISHI	Gaso	DED	YMLXV03.5GNG	DIAMANTE

DED= Dedicated; Dual Fuel; FF= Flexible Fuel; Elec = Electric; CNG = Compressed Natural Gas; Gaso = Gasoline; N/A = Not Applicable

Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
MITSUBISHI	Gaso	DED	YDSXV02.4GNG	ECLIPSE, GALANT
MITSUBISHI	Gaso	DED	YDSXV03.0GNG	ECLIPSE
NISSAN	Gaso	DED	YNSXV03.036A	MAXIMA, I30
INFINITY	Gaso	DED	YNSXV02.0C9B	G20
NISSAN	Gaso	DED	YNSXV02.0C9B	SENTRA
NISSAN	Gaso	DED	YNSXV02.433A	ALTIMA
CHEVROLET	Gaso	DED	YNTXV01.8FFA	PRIZM
SAAB	Gaso	DED	YSAXV02.3TV2	9-3 CONVERTIBLE, 9-3 VIGGEN, 0-3 VIGGEN W/CONVERTIBLE, 9-5 WAGON
SAAB	Gaso	DED	YSAXV02.3TE2	9-5 WAGON
SUZUKI	Gaso	DED	YSKXV1.84LHS	ESTEEM SEDAN/WAGON
CHEVROLET , SUZUKI	Gaso	DED	YSKXV1.30LNA	METRO HATCHBACK, METRO SEDAN, SWIFT HACTHBACK
TOYOTA	Gaso	DED	YTYXV03.0FFC	AVALON
TOYOTA	Gaso	DED	YTYXV03.0FXB	CAMRY, CAMRY SOLARA, CAMRY SOLARA CONVERTIBLE
TOYOTA	Gaso	DED	YTYXV01.5FFA	ECHO
LEXUS	Gaso	DED	YTYXT03.0FFE	RX 300, RX 300 4WD
LEXUS	Gaso	DED	YTYXV03.0FFD	GS 300
TOYOTA	Gaso	DED	YTYXV01.8FFD	MR2
TOYOTA	Gaso	DED	YTYXV01.8FFA	COROLLA
VOLKSWAGEN	Gaso	DED	YVWXV02.0227	JETTA, GOLF, NEW BEETLE
VOLKSWAGEN	Gaso	DED	YVWXV02.8224	JETTA GLX VR6, GOLF GTI VR6
VOLVO	Gaso	DED	YVVXV1.95MJ1	S40/V40
VOLVO	Gaso	DED	YVVXV2.43TF3	S70/V70
VOLVO	Gaso	DED	YVVXV2.92BU3	S80
VOLVO	Gaso	DED	YVVXV2.43PA3	V70/V70XC/S70, S70/V70/C70, V70

Ultra-Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
CHRYSLER	Gaso	DED	YCRXV0122V41	NEON
CHRYSLER	Gaso	DED	YCRXV0122V40	NEON
FORD	CNG	DED	YFMXV04.6VP5	CROWN VICTORIA CNG
PONTIAC, BUICK, CHEVROLET	Gaso	DED	YGMXV03.8901	BONNEVILLE, LE SABRE, PARK AVENUE, IMPALA, GRAND PRIX, REGAL
PONTIAC, BUICK, CHEVROLET	Gaso	DED	YGMXV03.8044	BONNEVILLE, IMPALA, LUMINA, MONTE CARLO, LE SABRE, REGAL, PARK AVENUE, GRAND PRIX
HONDA	Gaso	DED	YHNXV02.3PL4	ACCORD EX, LX SEDAN, EX, LX COUPE
HONDA	Gaso	DED	YHNXV03.2GL4	3.2TL
HONDA	Gaso	DED	YHNXV01.0LA4	INSIGHT
MAZDA	Gaso	DED	YTKXV01.6VJM	PROTEGE
MAZDA	Gaso	DED	YTKXV02.0VJM	626
TOYOTA	CNG	DED	YTYXV02.2PPA	CAMRY (CNG)
TOYOTA	Gaso	DED	YTYXV02.2JJB	CAMRY, CAMRY SOLARA, CAMRY SOLARA CONVERTIBLE

DED= Dedicated, Dual Fuel; FF= Flexible Fuel; Elec = Electric; CNG = Compressed Natural Gas; Gaso = Gasoline; N/A = Not Applicable

Super Ultra-Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
HONDA	Gaso	DED	YHNXV02.3NL5	ACCORD
HONDA	CNG	DED	YJNXV01.6KA5	CIVIC GX
NISSAN	Gaso	DED	YNSXV01.85BA	SENTRA CA 4-DR

Zero-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
General Motors EV-1	Elec	DED	N/A	EV-1
Honda EV Plus	Elec	DED	N/A	EV Plus
Hyundai Accent EV	Elec	DED	N/A	Accent EV
Nissan Altra EV	Elec	DED	N/A	Altra EV
Solectria FORCE	Elec	DED	N/A	FORCE
General Motors S-10	Elec	DED	N/A	S-10
Toyota RAV 4 EV	Elec	DED	N/A	RAV 4 EV

DED = Dedicated, Dual Fuel, FF = Flexible Fuel, Elec = Electric, CNG = Compressed Natural Gas, Gaso = Gasoline
N/A = Not Applicable

MODEL YEAR 2000 - LIGHT-DUTY TRUCKS

Low-Emission Vehicles Light-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
up to 3,750 lbs				
CHRYSLER	Gaso	DED	YCRXT0242130	CHEROKEE CLASSIC 2WD, LIMITED 2WD, SE 2WD/4WD, SE 2WD RHD, SPORT 2WD/4WD
FORD, MAZDA	Gaso	DED	YFMXT02.51FC	RANGER PICKUP 2WD (AUTO), B2500 2WD (AUTO)
FORD, MAZDA	Gaso	DED	YFMXT04.01F5	RANGER PICKUP 2WD (AUTO), B4000 2WD (AUTO)
CHERVOLET, GMC, ISUZU	E85	FF	YGMXT02.2122	S10 PICKUP 2WD, SONOMA 2WD, HOMBRE PICKUP 2WD
CHEVROLET, GMC	Gaso	DED	YGMXT04.3187	S10 PICKUP 2WD(AUTO), SONOMA 2WD(AUTO)
CHERVOLET, GMC, ISUZU	Gaso	FF	YGMXT02.2122	S10 PICKUP 2WD, SONOMA 2WD, HOMBRE PICKUP 2WD
KIA	Gaso	DED	YKMXT02.0B03	SPORTAGE
SUZUKI	Gaso	DED	YSKXT2.49LHA	GRAND VITARA
CHEVROLET, SUZUKI	Gaso	DED	YSKXT1.59LMA	TRACKER, VITARA
CHEVROLET, SUZUKI	Gaso	DED	YSKXT2.00LMA	TRACKER, VITARA
TOYOTA	Gaso	DED	YTYXT03.4FFH	TACOMA-2WD
TOYOTA	Gaso	DED	YTYXT02.0FFJ	RAV4 2WD, RAV4 4WD, RAV4 SOFT TOP 2WD/4WD
TOYOTA	Gaso	DED	YTYXT02.7FFJ	TACOMA-2WD, TACOMA-4WD
TOYOTA	Gaso	DED	YTYXT02.4FFJ	TACOMA 2WD
> 3,750 lbs				
BMW	Gaso	DED	YBMXT04.4E53	X5
CHRYSLER	Gaso	DED	YCRXT0287231	GRAND CHEROKEE (LAREDO 2WD/4WD, LIMITED 2WD/4WD)
DODGE/PLYMOUTH	Gaso	DED	YCRXT0148230	CARAVAN 2WD, VOYAGER 2WD
DODGE	Gaso	DED	YCRXT0287232	DAKOTA PICKUP 2WD/4WD
CHRYSLER,DODGE,PLYMOUTH	Gaso	DED	YCRXT0232230	CARAVAN LE/SE 2WD, GRAND CARAVAN ES/LE/SE 2WD, GRAND VOYAGER SE 2WD, TOWN & COUNTRY LX/SX/LIMITED 2WD, VOYAGER SE 2WD
CHRYSLER,DODGE,PLYMOUTH	Gaso	DED	YCRXT0201230	CARAVAN 2WD, CARAVAN LE/SE 2WD, GRAND CARAVAN LE/SE 2WD, GRAND VOYAGER 2WD, GRAND VOYAGER SE 2WD, TOWN & COUNTRY LX/SX 2WD, VOYAGER 2WD, VOYAGER SE 2WD

DED= Dedicated; FF= Flexible Fuel; E85 = 85% Ethanol; Elec = Electric; CNG = Compressed Natural Gas; Gaso = Gasoline; N/A = Not Applicatble

Low-Emission Vehicles Light-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
CHRYSLER JEEP	Gaso	DED	YCRXT0242230	CLASSIC 4WD, LAREDO 2WD, LIMITED 2WD/4WD, SE 4WD. SAHARA 4WD, SPORT 4WD
FORD, MERCURY	Gaso	DED	YFMXT04.02F3	EXPLORER 2WD/4WD (AUTO), MOUNTAINEER 4WD(AUTO)
FORD, MERCURY	Gaso	DED	YFMXT05.02F5	EXPLORER 2WD/4WD (AUTO), MOUNTAINEER 4WD(AUTO)
MERCURY	Gaso	DED	YFMXT03.335B	VILLAGER FWD WAGON
FORD, MAZDA	Gaso	DED	YFMXT04.02F2	RANGER PICKUP 2WD/4WD(AUTO), B4000 2WD/4WD(AUTO), EXPLORER 2WD/4WD
FORD	Gaso	DED	YFMXT04.22FC	F-150 PICKUP 2WD/4WD
FORD, MERCURY	Gaso	DED	YFMXT04.02F4	EXLORER 2WD/4WD (AUTO), MOUNTAINEER 2WD/4WD (AUTO)
FORD	Gaso	DED	YFMXT03.02F5	WINDSTAR
CHEVROLET, PONTIAC, OLDSMOBILE	Gaso	DED	YGMXT03.4142	VENTURE FWD, MONTANA FWD, SILHOUETTE FWD
CHEVROLET, GMC, ISUZU, OLDSMOBILE	Gaso	DED	YGMXT04.3188	S10 PICKUP 2WD/4WD, BLAZER 2WD, SONOMA 2WD/4WD, JIMMY 2WD/4WD, HOMBRE PICKUP 4WD, BLAZER 2WD/4WD, JIMMY 2WD/4WD, BRAVADA AWD, ASTRO 2WD CARGO/PASSENGER (AUTO), ASTRO AWD CARGO (AUTO), SAFARI 22WD CARGO/PASSENGER (AUTO), SAFARI AWD CARGO (AUTO)
HONDA	Gaso	DED	YHNXT03.5EA3	ODYSSEY EX / LX / VAN
ISUZU, HONDA	Gaso	DED	YSZXT03.52JK	RODEO, PASSPORT
MAZDA	Gaso	DED	YTKXT02.52FM	MPV
MITSUBISHI	Gaso	DED	YMTXT03.5GNH	MONTERO
MITSUBISHI	Gaso	DED	YMTXT03.0GNG	MONTERO SPORT 2WD/4WD
MITSUBISHI	Gaso	DED	YMTXT03.5GNG	MONTERO SPORT 2WD/4WD
NISSAN	Gaso	DED	YNSXT03.335B	QUEST VAN
NISSAN	Gaso	DED	YNSXT03.335A	FRONTIER V6 TRUCK
TOYOTA	Gaso	DED	YTYXT03.0FFS	SIENNA
TOYOTA	Gaso	DED	YTYXT03.4FFR	TUNDRA 2-WHEEL DRIVE, TUNDRA 4-WHEEL DRIVE
TOYOTA	Gaso	DED	YTYXT02.7FFR	4RUNNER 2WD, 4RUNNER 4WD, TACOMA 4WD

DED= Dedicated, FF = Flexible Fuel; E85 = 85% Ethanol; Elec = Electric; CNG = Compressed Natural Gas; Gaso = Gasoline; N/A = Not Applicable

Ultra-Low-Emission Vehicles Light-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
FORD	Gaso	DED	YFMXT03.82JC	WINDSTAR
FORD	Gaso	DED	YFMXT03.82J5	WINDSTAR
Zero-Emission Vehicles Light-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
Dodge Caravan	Elec	DED	N/A	Caravan
Ford Ranger pickup	Elec	DED	N/A	Ranger
Plymouth Voyager Epic EV	Elec	DED	N/A	Voyager Epic EV
Plymouth Voyager EV	Elec	DED	N/A	Voyager EV

DED= Dedicated; FF= Flexible Fuel; E85 = 85% Ethanol; Elec = Electric; CNG = Compressed Natural Gas; Gaso = Gasoline; N/A = Not Applicatble

MODEL YEAR 2000 - MEDIUM-DUTY TRUCKS

Low-Emission Vehicles Medium-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
BMW	Gaso	DED	YBMXT04.453M	X5
DODGE	Gaso	DED	YCRXA0360H32	DAKOTA PICKUP 4WD, DURANGO 2WD/4WD SUV
DODGE	Gaso	DED	YCRXA0360J31	RAM 1500 PICKUP 4WD, RAM 2500/3500 PICKUP 4WD, 2500 PICKUP HDV 2WD/4WD, 3500 PICKUP 2WD HDV
DODGE	Gaso	DED	YCRXA0360H31	RAM 1500 PICKUP 2WD/4WD
FORD	Gaso	DED	YFMXA05.4JGP	F-250 PICKUP 2WD/4WD; F-350 PICKUP 2WD/4WD; EXCURSION 2WD/4WD (AUTO)
FORD	Gaso	DED	YFMXA05.4HGC	F150 PICKUP 2WD/4WD SHORT WHEEL BASE (AUTO), F-150 PICKUP 2WD/4WD LONG WHEELBASE (AUTO)
FORD, LINCOLN	Gaso	DED	YFMXA05.4RF7	EXPEDITION 2WD, EXPEDITION 2WD/4WD, NAVIGATOR 2WD/4WD (4-VALVE), F-150 PICKUP 2WD/4WD SHORT WHEELBASE (AUTO)
FORD	Gaso	DED	YFMXA04.6HGC	F-150 PICKUP 2WD/4WD SHORT WHEEL BASE
FORD	Gaso	DED	YFMXA06.8JGC	E350 2WD
FORD	Gaso	DED	YFMXA04.2JGC	E-150 ECONOLINE 2WD, E-250 ECONOLINE 2WD, E-250 CAB CHASSIS 2WD, E-250 STRIP CHASSIS 2WD, E-150 CLUB
FORD	Gaso	DED	YFMXA04.66FF	EXPEDITION 2WD, EXPEDITION 2WD/4WD, E-150 ECONOLINE 2WD, E-150 CLUB WAGON
FORD	Gaso	DED	YFMXA04.2HGC	E-150 ECONOLINE 2WD
FORD	Gaso	DED	YFMXA06.8JGN	F250 PICKUP 2WD/4WD, F350 PICKUP 2WD/4WD, EXCURSION 2WD/4WD
CHEVROLET, GMC	Gaso	DED	YGMXA05.3184	C1500 TAHOE 2WD, K1500 TAHOE 4WD, C1500 YUKOU 2WD, K1500 YUKOU 4WD, C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD, C1500 YUKOU XL 2WD, K1500 YUKOU XL 4WD
CHEVROLET, GMC	Gaso	DED	YGMXA04.3192	G1500/G2500 VAN 2WD, G1500/G2500 EXPRESS 2WD, G1500/G2500 SAVANA PASSENGER VAN, G1500/G2500 SAVANA 2WD
CHEVROLET, GMC	Gaso	DED	YGMXA05.3183	K-1500 SILVERADO 4WD, K1500 SIERRA 4WD, C1500 SILVERADO 2WD, C1500 SIERRA 2WD

Low-Emission Vehicles Medium-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
CHEVROLET, GMC	Gaso	DED	YGMXA05.7194	C1500 TAHOE 2WD, C1500 YUKON 2WD
CHEVROLET, GMC, CADILLAC	Gaso	DED	YGMXA05.7185	G1500/G2500 VAN 2WD, G1500/G2500 EXPRESS 2WD, G1500/G2500 SAVANA PASSENGER VAN, K1500 TAHOE 4WD, K1500 YUKON 4WD, ESCALADE 4WD, C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD
CHEVROLET, GMC	Gaso	DED	YGMXA04.3190	C1500 SILVERADO 2WD, K1500 SILVERADO 4WD, C1500 SIERRA 2WD, K1500 SIERRA 4WD
MERCEDES-BENZ	Gaso	DED	YMBXT04.3GNB	ML430
MERCEDES-BENZ	Gaso	DED	YMBXV05.5GNB	ML 55 AMG
MERCEDES-BENZ	Gaso	DED	YMBXT03.2GNB	ML 320
ROVER, LAND ROVER	Gaso	DED	YLRXT04.6002	DISCOVERY, RANGE ROVER
TOYOTA	Gaso	DED	YTYXT04.7GBX	LAND CRUISER WAGON
TOYOTA	Gaso	DED	YTYXT04.7GXW	TUNDRA 2-WEEL DRIVE, TUNDRA 4-WHEEL DRIVE
Ultra-Low-Emission Vehicles Medium-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
DODGE	Gaso	DED	YCRXA0287H41	DURANGO 2WD/4WD SUV
CHEVROLET, GMC	Gaso	DED	YGMXA04.3189	ASTRO AWD CARGO/PASSENGER (AUTO); SAFARI AWD CARGO/PASSENGER (AUTO)
Super-Ultra-Low-Emis Vehicles Medium-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
CHRYSLER	CNG	DED	YCRXT05.26RC	RAM VAN 2500/3500/B3500 2WD, RAM WAGON 2500 W2WD, RAM WAGON 3500 2WD HDV
FORD	CNG	DED	YFMXT05.4RP5	F-150 PICKUP NATURAL GAS
FORD	CNG	DED	YFMXT05.4RP6	E-250 NATURAL GAS, E-350 NATURAL GAS

DED= Dedicated; CNG = Compressed Natural Gas; Gaso = Gasoline

ATTACHMENT 4

ARB-CERTIFIED ENGINES/VEHICLES
NOT QUALIFYING
UNDER PROPOSED RULE 1191(e)

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
PASSENGER CARS

MANUFACTURER	STD	MAKE COMBO	MODELS COMBO
ASTON MARTIN	TIER 1	ASTON MARTIN	DB7 VANTAGE COUP, DB7 VANTAGE VOLANTE
AUDI	TLEV	AUDI	TT COUPE, TT ROASTER
AUDI	TLEV	AUDI	AUDI S4
AUDI	TLEV	AUDI	AUDI S6, A6 QUATTRO, A6 AVANT QUATTRO
AUDI	TLEV	AUDI	A8 QUATTRO
AUDI	TLEV	AUDI	AUDI S4, AUDI A6
BMW	TLEV	BMW	M ROADSTER, M COUPE
BMW	TLEV	BMW	M5, Z8
CHRYLER	TIER 1	PLYMOUTH	PROWLER
CHRYLER	TLEV	CHRYSLER, DODGE	CIRRUS, SEBRING COVERTBLE, STRATUS
CHRYLER	TIER 1	DODGE	BREEZE, STRATUS
CHRYLER	TIER 1	CHRYSLER	VIPER COVERTIBLE, VIPER COUPE
FERRARI	TIER 1	FERRARI	550 MARANELLO, 456 M
FORD	TIER1	FORD, MERCURY, LINCOLN	CROWN VICTORIA POLICE, GRAND MARQUIS, TOWN CAR
FORD	TIER 1	FORD	MUSTANG COBRA
FORD	TLEV	FORD, MERCURY	CONTOUR, MYSTIQUE, COUGAR
FORD	TIER1	FORD, MERCURY	CONTOUR, CONTOUR SVT, MYSTIQUE, COUGAR
FORD	TLEV	LINCOLN	CONTINENTAL
FORD	TLEV	FORD	MUSTANG GT
FORD	TLEV	LINCOLN	LS6
GFI	TLEV	FORD	CONTOUR

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
PASSENGER CARS

MANUFACTURER	STD	MAKE COMBO	MODELS COMBO
GM	TIER 1	OLDSMOBILE, CADILLAC	AURORA, SEVILLE, ELDORADO, DEVILLE
GM	TLEV	PONTIAC, CHEVROLET	SUNFIRE (manual), CAVALIER (manual)
HONDA	TLEV	HONDA	INTEGRA 3 DR GS-R, INTEGRA 4 DR GS-R
HONDA	TIER 1	HONDA	PRELUDE
HONDA	TIER 1	HONDA	INTEGRA 3 DR TYPE-R, INTEGRA 3 DR TYPE-R
HONDA	TLEV	HONDA	INTEGRA 3 DR LS, INTEGRA 3 DR GS, INTEGRA 4 DR LS, INTEGRA 4 DR GS
HONDA	TLEV	HONDA	CIVIC COUPE HX
HONDA	TLEV	HONDA	CIVIC COUPE Si/SiR
HYNDA	TLEV	HUYNDAI	SONATA
JAGUAR	TIER 1	JAGUAR	XJR, VANDEN PLAS, XKR COUPE, XKR CONVERTIBLE
JAGUAR	TLEV	JAGUAR	JAGUAR X200 V6 (S-TYPE)
JAGUAR	TLEV	JAGUAR	S-TYPE
MAZDA	TLEV	MAZDA	626
MAZDA	TIER 1	MAZDA	MILLENIA 2.5 L
MAZDA	TIER 1	MAZDA	MILLENIA 2.3 L
MERCEDES-BENZ	TIER 1	MERCEDES-BENZ	SL 600
MERCEDES-BENZ	TLEV	MERCEDES-BENZ	C 230, SLK 230
MMMA	TLEV	CRYSLER, DODGE	SEBRING, AVENGER
NISSAN	TIER 1	NISSAN	Q45
ROLLS-ROYCE	TIER 1	BENTLEY, ROLLS-ROYCE	CORNICHE

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
PASSENGER CARS

MANUFACTURER	STD	MAKE COMBO	MODELS COMBO
ROLLS-ROYCE	TIER 1	ROLLS-ROYCE	SILVER SERAPH, PARK WARD
SAAB	TIER 1	SAAB	9-5, 9-5 WAGON
SUZUKI	TLEV	SUZUKI	ESTEEM SEDAN/WAGON
SUZUKI	TLEV	CHEVROLET	METRO HATCHBACK
TOYOTA	TLEV	TOYOTA	CELICA
TOYOTA	TIER 1	TOYOTA	CAMRY, CAMRY SOLARA
TOYOTA	TLEV	LEXUS	LS 400, SC 400
TOYOTA	TLEV	LEXUS	SC 300
VOLKSWAGEN	TLEV	VOLKSWAGEN	NEW BEETLE
VOLVO	TLEV	VOLVO	S80

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
LIGHT-DUTY VEHICLES

MFR	STD	MAKE COMBO	MODELS COMBO
CHRYSLER	TIER1	CHRYSLER, DODGE	GRAND CARAVAN ES/LE/SE (AWD), TOWN & COUNTRY LX (AWD), TOWN & COUNTRY LIMITED (AWD)
CHRYSLER	TLEV	DODGE	DAKOTA PICKUP 2WD/4WD
CHRYSLER	TLEV	DODGE, CHRYSLER	DAKOTA PICKUP 2WD, CHEROKEE SE 2WD/4WD, WRANGLER SE 4WD
CHRYSLER	TLEV	DODGE	DAKOTA PICKUP 2WD
FORD	TLEV	FORD, MAZDA	RANGER PICKUP FFV ETHANOL 2WD/4WD,B3000 FFV ETHANOL 2WD/4WD
FORD	TLEV	FORD	POSTAL VEHICLE
FORD	TLEV	FORD, MAZDA	RANGER PICKUP 2WD (MANUAL), B4000 2WD (MANUAL)
FORD	TLEV	FORD, MAZDA	RANGER PICKUP 2WD/4WD (MANUAL), B4000 2WD/4WD (MANUAL)
FORD	TLEV	FORD, MAZDA	RANGER PICKUP FFV ETHANOL 2WD, B3000 FFV ETHANOL 2WD
FORD	TLEV	FORD, MAZDA	RANGER PICKUP 2WD (MANUAL), B2500 2WD (MANUAL)
FORD	TLEV	FORD	POSTAL VEHICLE
FORD	TIER1	FORD	FORD F-150 PICKUP 2WD LIGHTNING
GM	TLEV	CHEVROLET, GMC	S10 PICKUP 2WD(MANUAL), SONOMA 2WD(MANUAL)
HONDA	TLEV	HONDA	CR-V EX/LX
ISUZU	TLEV	ISUZU, HONDA	VEHICROSS, RODEO, PASSPORT, AMIGO 4WD
ISUZU	TLEV	ISUZU	RODEO 2WD, AMIGO 2WD
NISSAN	TLEV	NISSAN	FRONTIER REG CAB/KING CAB
NISSAN	TLEV	NISSAN	FRONTIER 4WD REG CAB/KING CAB, XTERRA
NISSAN	TLEV	NISSAN, INFINITI	PATHFINDER, QX4
VOLKSWAGEN	TIER1	VOLKSWAGEN	EUROVAN VR6/MV, EUROVAN GLS VAN, EUROVAN MV POP TOP

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
MEDIUM-DUTY VEHICLES

MFR	STD.	MAKE COMBO	MODELS COMBO
CHRYSLER	TIER1	DODGE	RAM 1500 PICKUP 2WD/4WD, VAN 2500 2WD, WAGON 2500 2WD, 2500 PICKUP 4WD, 3500 PICKUP 4WD, VAN 3500 2WD/4WD
CHRYSLER	TIER1	DODGE	RAM 2500 PICKUP 4WD, 2500 PICKUP HDV 2WD/4WD, 3500 PICKUP 2WD/4WD, 3500 PICKUP 2WD HDV
CHRYSLER	TIER1	DODGE	RAM 3500 PICKUP 4WD
CHRYSLER	TIER1	DODGE	RAM 1500 PICKUP 2WD, RAM 1500 PICKUP 2WD, VAN 1500 2WD, WAGON 1500 2WD
CHRYSLER	TIER1	DODGE	RAM 1500 PICKUP 2WD/4WD, RAM 1500 PICKUP 2WD/4WD, VAN 1500 2WD, WAGON 1500 2WD
EUROPA	TIER1	EUROPA	G500, G500 SPORT, G500 OPEN TOP
GM	TIER1	CHEVROLET, GMC	K2500/3500 PICKUP 4WD, C2500/3500 PICKUP 2WD, K2500/3500 SIERRA 4WD, G3500 SAVANA 2WD PASSENGER, G3500 SAVANA CARGO, C2500/3500 SIERRA 2WD, G3500 EXPRESS 2WD, G3500 VAN 2WD, C2500 SUBURBAN 2WD, K2500 SUBURBAN 4WD, C2500 SUBURBAN 2WD, K2500 SUBURBAN 4WD
GM	TIER1	CHEVROLET, GMC	K-1500 SILVERADO 4WD, K1500 SIERRA 4WD, C1500 SILVERADO 2WD, C1500 SIERRA 2WD
GM	TIER1	CHEVROLET, GMC	G1500 VAN 2WD, G1500 SAVANA CARGO, C1500 TAHOE 4WD,C1500 YUKON 2WD
GM	TIER1	CHEVROLET, GMC, CADILLAC	K1500 TAHOE 4WD, K1500 YUKON 4WD, ESCALADE 4WD, G1500/G2500 VAN 2WD, G1500/G2500 EXPRESS 2WD, G1500/G2500 SAVANA PASSENGER, G1500/G2500 SAVANA 2WD, C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD, C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD
GM	TIER1	CHEVROLET, GMC	C2500 SUBURBAN 2WD, K2500 SUBURBAN 4WD, C2500 YUKON XL 2WD, K2500 YUKON XL 4WD
GM	TIER1	CHEVROLET, GMC	C1500 SILVERADO 2WD, K1500 SILVERADO 4WD, C1500 SIERRA 2WD, K1500 SILRRA 4WD, C2500 SIERRA 2WD
GM	TIER1	CHEVROLET, GMC	K2500/3500 PICKUP 4WD, C2500/3500 PICKUP 2WD, C2500/3500 SIERRA 2WD, G1500/2500/3500 SAVANA 2WD CARG, K2500/K3500 SIERRA 4WD,G1500/2500/3500 SAVANA PASSENGER, G1500/2500/3500 EXPRESS 2WD, G1500/2500/3500 VAN 2WD, C2500 SUBURBAN 2WD, K2500 SUBURBAN 4WD

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
MEDIUM-DUTY VEHICLES

MFR	STD	MAKE COMBO	MODELS COMBO
GM	TIER1	CHEVROLET, GMC	C20903, K20903, K30943 (C2500 PICKUP 2WD, K2500/3500 PICKUP 4WD, C2500/3500 SIERRA 2WD, K2500/3500 SIERRA 4WD)
WINNEBAGO	TIER1	WINNEBAGO	RIALTA

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South Coast Air Quality Management District

(Adopted June 16, 2000)

Rule 1192. Clean On-Road Transit Buses

(a) Purpose

For public transit fleets operating in the South Coast Air Quality Management (District), this rule requires public transit fleet operators to acquire alternative-fuel heavy-duty vehicles when procuring or leasing these vehicles to reduce air toxic and criteria pollutant emissions.

(b) Applicability

This rule applies to those public transit fleets with 15 or more public transit vehicle or urban buses, operated by government agencies or operated by private entities under contract to government agencies, that provide passenger transportation services including intra- and intercity shuttle services. This rule shall not apply to vehicles or services pursuant to paragraph (e) including school transportation services, long-distance services, and heavy-duty on-road vehicles not used for the express purpose of public transportation.

No provisions of this rule shall preclude applicability of more stringent regulations developed by the State of California or the federal government imposed on heavy-duty vehicles or urban buses used for the express purpose of transporting passengers.

(c) Definitions

For purposes of this rule, the following definitions shall apply:

(1) ALTERNATIVE-FUEL HEAVY-DUTY VEHICLE means a heavy-duty vehicle, urban bus or engine that uses compressed or liquified natural gas, propane, methanol, electricity, fuel cells, or other advanced technologies that do not rely on diesel fuel, and meets the emission requirements of Title 13, Section 1956.1 of the California Code of Regulations [adopted by the California Air Resources Board (CARB) on February 24, 2000]. For the purpose of this rule, hybrid-electric and dual-fuel technologies that use diesel fuel are not considered alternative-fuel technologies.

(2) HEAVY-DUTY VEHICLE means any vehicle having a gross vehicle weight of at least 14,000 pounds.

(3) PARATRANSIT VEHICLE means any heavy-duty transit vehicle as defined in Sections 336 and 462 of the California Vehicle Code and has a gross vehicle weight of at least 14,000 pounds but no greater than 33,000 pounds.

(4) PUBLIC TRANSIT VEHICLE means any heavy-duty vehicle used for the express purpose of transporting passengers. A transit vehicle usually has a gross vehicle weight of at least 14,000 pounds but no greater than 33,000 pounds.

(5) PUBLIC TRANSIT FLEET OPERATOR is a person who owns, leases, or operates substantially public transit vehicles or urban buses in the District. A person is any public entity responsible for administering and managing transit activities and services. Public transit fleet operators can directly operate transit service or contract out for all or part of the total transit service provided and includes transit districts, included transit districts, municipal operators, included municipal operators, and transit development board

as defined in Chapter 4, Article 1 of the Public Utilities Code. Public transit fleet operator includes any private transit operator that is contracted by a government agency or a public transit agency.

(6) URBAN BUS means a passenger-carrying vehicle with a gross vehicle weight of at least 33,000 pounds, powered by a heavy heavy-duty diesel engine, or of a type normally powered by a heavy heavy-duty diesel engine, with a load capacity of fifteen (15) or more passengers and intended primarily for intra-city operation, i.e., within the confines of a city or greater metropolitan area. Urban bus operation is characterized by short rides and frequent stops. To facilitate this type of operation, more than one set of quick-operating entrance and exit doors would normally be installed. Since fares are usually paid in cash or token, rather than purchased in advance in the form of tickets, urban buses would normally have equipment installed for collection of fares.

(7) VEHICLE means any self-propelled, motorized device that is permitted to operate on public roads through Department of Motor Vehicle registration or the federal government.

(d) Fleet Requirements

(1) Beginning upon adoption of this rule, for public transit fleet operators that are considered transit districts or included transit districts, or any public entity, joint powers agency, or combination thereof that provides public transportation services, with 15 or more transit vehicles or urban buses, except municipal or included municipal operators with fewer than 100 transit vehicles or urban buses, all new transit

vehicle or urban bus purchases or leases must be alternative-fuel heavy-duty vehicles when adding or replacing buses to their vehicle fleet.

(2) Beginning July 1, 2001, for public transit fleet operators that are considered municipal operators or included municipal operators with 15 or more but less than 100 transit vehicles or urban buses, all new transit vehicle or urban bus purchases or leases must be alternative-fuel heavy-duty vehicles when adding or replacing buses to their vehicle fleets.

(3) Private transit operators contracted by a transit agency or government agency shall meet the requirements of either subparagraphs (d)(1) or (d)(2) depending on the transit agency or government agency.

(e) Exemptions

(1) The provisions of this rule shall not apply to the following:

(A) Paratransit vehicles.

(B) Buses used for the expressed purpose of providing long-distance service (out-of-District), that are generally equipped with luggage compartments, restrooms, and overhead storage.

(C) No more than ten evaluation/test vehicles per fleet, provided by or operated by vehicle manufacturer for testing or evaluation, exclusively.

(D) School buses as defined in the California Vehicle Code.

(E) Buses that are not used for the express purpose of public transportation such as employee transportation or transportation of prisoners.

(F) Signed contract agreements as of the date of adoption of this rule for the purchase or lease of new transit vehicles or urban buses. This exemption does not apply to execution of options to purchase transit vehicles following the date of adoption of this rule.

(2) Upon demonstration to the Executive Officer, heavy-duty vehicles used for the express purpose of transporting passenger for which no alternative-fuel engine and chassis configuration is available commercially or could be used.

(f) Compliance Auditing and Enforcement

(1) The fleet operator shall provide at the request of the District any files and/or records created to comply with subdivision (d) including fleet-specific information, such as a list of official DMV registrations, and manufacturer, model-year, model, engine family number, and fuel type of each fleet vehicle. The fleet operator shall keep all required records for a minimum of two years.

(2) Any fleet operator seeking an exemption under subdivision (e) shall supply proof that their vehicle or fleet is exempted from this rule when requested by the District.

(g) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances. In the event any of the exceptions to this rule is held by judicial

order to be invalid, the persons or circumstances covered by the exception shall instead be required to comply with the remainder of this rule.

South Coast Air Quality Management District

(Adopted June 16, 2000)

Rule 1193. Clean On-Road Residential and Commercial Refuse Collection Vehicles

(a) Purpose

For solid waste collection fleets operating in the South Coast Air Quality Management District (District), this rule requires public and private solid waste collection fleet operators to acquire alternative-fuel refuse collection heavy-duty vehicles when procuring or leasing these vehicles to reduce air toxic and criteria pollutant emissions.

(b) Applicability

This rule applies to government agencies and private entities that operate solid waste collection fleets with 15 or more solid waste collection vehicles. This rule shall not apply to vehicles or services pursuant to paragraph (e).

(c) Definitions

For purposes of this rule, the following definitions shall apply:

(1) ALTERNATIVE-FUEL HEAVY-DUTY VEHICLE means a heavy-duty vehicle or engine that uses compressed or liquefied natural gas, liquefied petroleum gas, methanol, electricity, fuel cells, or other advanced technologies that do not rely on diesel fuel.

(2) DUAL-FUEL HEAVY-DUTY VEHICLE means a heavy-duty vehicle equipped with a diesel engine that

uses an alternative fuel (such as compressed or liquefied natural gas, liquefied petroleum gas, methanol, or other advanced technologies) in combination with diesel fuel to enable compression ignition. A dual-fuel engine typically uses the alternative fuel to supply 85 percent of the total engine fuel requirement on a BTU basis. A dual-fuel engine must be certified by CARB to meet an applicable optional nitrogen oxide exhaust emission standard and be fitted with a particulate matter aftertreatment control device that achieves a particulate matter emissions level no greater than the particulate matter emissions level of the latest certified M-100 methanol engine certified by CARB prior to the date of the adoption of this rule.

(3) HEAVY-DUTY VEHICLE means any vehicle having a gross vehicle weight of at least 14,000 pounds.

(4) PUBLIC OR PRIVATE SOLID WASTE COLLECTION FLEET OPERATOR is a person who owns, leases, or operates substantially in the District, solid waste collection, rolloff, or transfer vehicles. A person is a federal, state, county, or city government department or agency; special district such as a sanitation or water district; individual firm; limited liability company; association; partnership; corporation or any other entity that collects, transports, or transfers solid waste, yard waste, or recyclable materials.

(5) ROLLOFF VEHICLE means any heavy-duty vehicle used for the express purpose of transporting waste containers such as open boxes or compactors.

(6) SOLID WASTE means all putrescible and nonputrescible solid, and semisolid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home

and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes. Solid waste does not include hazardous waste, radioactive waste, or medical waste as defined in Section 40191 (b) of the Public Resources Code.

(7) SOLID WASTE COLLECTION VEHICLE means any heavy-duty vehicle used for the express purpose of collecting solid waste, yard waste, or recyclable materials from residential or commercial establishments. A solid waste collection vehicle is a vehicle having the capability to collect solid waste using, either manual or automated, front, side or rear loaders and generally operates on fixed routes.

(8) TRANSFER VEHICLE means any heavy-duty vehicle used for the express purpose of transferring solid waste. A transfer vehicle is usually a tractor/trailer combination where the trailer is loaded at a processing or transfer station.

(9) VEHICLE means any self-propelled, motorized device that is permitted to operate on public roads through Department of Motor Vehicle registration or the federal government.

(d) Fleet Requirements

(1) Beginning July 1, 2001, for public and private solid waste collection fleet operators of 50 or more solid waste collection vehicles; and beginning July 1, 2002, for public and private solid waste collection fleet operators of 15 or more solid waste collection vehicles, or a combined total of 15 or more rolloff, transfer, or solid waste collection vehicles, all additions to an existing fleet, or formation of a new fleet, of solid waste collection vehicles shall be by purchase or lease of:

(A) alternative-fuel heavy-duty vehicles when adding or replacing solid waste collection vehicles to their vehicle fleet; or

(B) Prior to July 1, 2003, dual-fuel heavy-duty vehicles when adding or replacing solid waste collection vehicles.

(2) Beginning July 1, 2001, for public and private solid waste collection fleet operators with a combined total of 15 or more transfer or rolloff vehicles, all additions to an existing fleet, or formation of a new fleet, of transfer or rolloff vehicles shall be by purchase or lease of alternative-fuel or dual-fuel heavy-duty vehicles when adding or replacing transfer or rolloff vehicles.

(e) Exemptions

The provisions of this rule shall not apply to the following:

(1) No more than ten evaluation/test vehicles per fleet, provided by or operated by vehicle manufacturer for testing or evaluation, exclusively.

(2) Heavy-duty vehicles not used for the express purpose of collecting solid waste from residential or commercial establishments or transferring of solid waste from a waste transfer station to a landfill.

(3) Upon demonstration to the Executive Officer, any solid waste collection vehicles as required pursuant to paragraph (d) for which no alternative-fuel engine and chassis configuration is available commercially or could be used.

(4) Any vehicle added to or replacing a vehicle in an existing fleet after the applicable implementation date of this rule, as specified in subdivision (d), as long as the purchase contract for acquisition of such

vehicle is signed before the date of adoption of this rule. This exemption does not apply to the execution of options to acquire vehicles where the option is executed after the date of adoption of this rule and where vehicle delivery does not occur until after the applicable implementation date as specified in subdivision (d).

(5) Persons subject to this rule who are unable to comply may apply for a variance with the SCAQMD Hearing Board. (See SCAQMD Regulation V and California Health and Safety Code Sections 42350 through 42372 for information regarding variances.)

(6) Upon demonstration to the Executive Officer that all existing solid waste collection vehicles equipped with 1995 and subsequent model year diesel engines in the fleet, have been equipped CARB certified particulate matter control devices that achieve 71 percent or greater reductions in particulate matter emissions, a fleet operator may purchase dual-fuel vehicles pursuant to subparagraph (d)(1)(B) until July 1, 2003.

(f) Compliance Auditing and Enforcement

(1) The fleet operator shall provide at the request of the District any files and/or records created to comply with subdivision (d) including fleet-specific information, such as a list of official DMV registrations, manufacturer, model-year, model, engine family number, fuel type, and fuel usage of each fleet vehicle. The fleet operator shall keep all required records for a minimum of two years.

(2) Any fleet operator seeking an exemption under subdivision (e) shall supply proof that their vehicle or fleet is exempted from this rule when requested by the District.

(3) No later than July 1, 2001, any fleet operator with 15 or more, but fewer than 50 vehicles subject to paragraph (d)(1) shall submit a letter to the Executive Officer outlining the intended source of alternative fuel to be used for compliance purposes.

(g) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances. In the event any of the exceptions to this rule is held by judicial order to be invalid, the persons or circumstances covered by the exception shall instead be required to comply with the remainder of this rule.

South Coast Air Quality Management District

(Adopted August 18, 2000) (Amended October 20, 2000)

RULE 1194. COMMERCIAL AIRPORT GROUND ACCESS

(a) Purpose

For all public and private fleets that provide passenger transportation services out of commercial airports operating in the South Coast Air Quality Management (District), this rule requires passenger car, light-duty truck, medium-duty transit vehicle, and heavy-duty transit vehicle fleet operators to acquire cleaner burning or alternative-fueled vehicles to reduce air toxic and criteria pollutant emissions when procuring or leasing these vehicles in the District unless otherwise exempt.

(b) Applicability

This rule applies to all public and private fleet operators of fifteen (15) or more vehicles operated by the airport authority or any other public or private fleet operators that transport passengers from commercial airports located in the District. This rule shall not apply to public or private fleet operators subject to Rules 1191, 1192, 1193, [adopted June 16, 2000], 1195 [*proposal for school buses*], 1196 [adopted October 20, 2000], and 1186.1 [adopted August 18, 2000].

(c) Definitions

For purposes of this rule, the following definitions shall apply:

(1) AIRPORT FLEET OPERATOR is a person who owns, leases, or operates vehicles at commercial airports located in the District for the express purpose of transporting passengers. A person is a public agency that is responsible for airport transportation operation; or any private individual firm, association, franchise, cooperative, organization, partnership, business trust corporation, company, contractor, user, or owner that operates at commercial airports and provides transportation services including taxicab, limousine, passenger shuttles, and courtesy shuttle transportation such as those provided by private vehicle leasing and rental agencies and hotels, or transports passengers to and from commercial airports and/or granted approval by the commercial airport authority to pick up passengers within the jurisdictional boundaries of a commercial airport.

(2) ALTERNATIVE-FUELED VEHICLE means a light- or medium-duty vehicle, or heavy-duty transit vehicle or engine that is not powered by gasoline or diesel fuel.

(3) COMMERCIAL AIRPORT AUTHORITY means any oversight entity that regulates the operations in and out of a commercial airport. A commercial airport authority may be a commission such as an airport or taxicab commission, County Board of Supervisors, or city council.

(4) DMV means California Department of Motor Vehicles.

(5) FLEET VEHICLES means any vehicles including passenger cars, light-duty trucks, or medium- and heavy-duty on-road vehicles used to provide public transportation, owned, leased, or operated by an public or private airport fleet operator that totals 15 or

more vehicles. In addition, only those vehicles operated substantially or dedicated to operate at all commercial airports should be counted when accounting for the number of fleet vehicles operating at commercial airports. An airport fleet operator may own, lease, or operate vehicles out of several commercial airports in the District and all vehicles operated by the operator shall be added together in calculating the total number of fleet vehicles.

(6) HEAVY-DUTY TRANSIT VEHICLE means any vehicle having a gross vehicle weight of at least 14,000 pounds that is used for the express purpose of providing public transportation or employee transportation.

(7) MEDIUM-DUTY VEHICLE means any vehicle having a gross vehicle weight of more than 6,000 pounds and less than 14,000 pounds that is used for the express purpose of providing public transportation or employee transportation.

(8) PASSENGER CAR means any vehicle designed primarily for transportation of persons and having a design capacity of twelve (12) persons or less. A passenger van or minivan is considered a passenger car for the purposes of this rule.

(9) SUPER-ULTRA-LOW-EMISSION VEHICLE (SULEV) means any vehicle certified to super-ultra-low-emission standards set forth in the "California Exhaust Emission Standards and Test Procedures for 1988-2000 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" and "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as incorporated by reference in Sections 1960.1(k) and 1961(d), Title 13, California Code of Regulations.

(10) ULTRA-LOW-EMISSION VEHICLE (ULEV) means any vehicle certified to ultra-low-emission standards set forth in the "California Exhaust Emission Standards and Test Procedures for 1988-2000 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" and "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as incorporated by reference in Sections 1960.1(k) and 1961(d), Title 13, California Code of Regulations.

(11) VEHICLE means any self-propelled, motorized device that is permitted to operate on public roads through DMV registration.

(12) ZERO-EMISSION VEHICLE (ZEV) means any vehicle certified to the zero-emission standards set forth in the "California Exhaust Emission Standards and Test Procedures for 2003 and Subsequent Model Zero-Emission Vehicles, and 2001 and Subsequent Model Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes," as incorporated by reference in Section 1962(d), Title 13, California Code of Regulations.

(d) Fleet Purchase Requirements

(1) Beginning July 1, 2001, for airport fleet operators providing limousine or transit shuttle services out of commercial airport terminals to the public through the collection of fares or fees, or provide courtesy pickup services out of commercial airport terminals, all new purchases or leases of passenger cars or medium-duty vehicles used to pick up passengers at commercial airport terminals shall be a vehicle that has been certified by CARB that meets the ULEV, SULEV, or ZEV emission standards when adding or

replacing a passenger car or medium-duty vehicle to their fleet.

(2) For shuttle van services that provide multiple-party passenger transportation services to commercial airport terminals and do not operate on fixed or scheduled routes:

(A) Beginning July 1, 2001, 50 percent of all new purchases or leases of vehicles used to transport passengers in and out of commercial airport terminals, shall be vehicles that are certified by CARB to meet ULEV, SULEV, or ZEV emission standards when adding or replacing a passenger car or medium-duty vehicle to their fleet.

(B) Beginning July 1, 2002, 100 percent of all new purchases or leases of vehicles used to transport passengers in and out of commercial airport terminals, shall be vehicles that are certified by CARB to meet ULEV, SULEV, or ZEV emission standards when adding or replacing a passenger car or medium-duty vehicle to their fleet.

(3) Beginning July 1, 2001, for airport fleet operators providing transit shuttle services to the public in and out of airport terminals to airport parking lots, car rental lots, or hotels/motels, all new heavy-duty transit vehicle purchases or leases shall be alternative-fueled vehicles when adding or replacing transit vehicles to their vehicle fleet.

(4) Beginning January 1, 2002, for airport fleet operators providing taxicab pickup services out of commercial airport terminals through the collection of fares or fees, all new purchases or leases of passenger cars or medium-duty vehicles used to pick up passengers at commercial airport terminals shall be a vehicle that

has been certified by CARB that meets the ULEV, SULEV, or ZEV emission standards when adding or replacing a passenger car or medium-duty vehicle to their fleet.

(5) Vehicles acquired pursuant to paragraph (d)(4) must be operated within the South Coast Air Quality Management District for a minimum of three years if funding to offset the purchase cost, less $10,000 in accordance with paragraph (e)(3), was made available.

(6) Prior to January 1, 2002, airport fleet operators voluntarily purchasing an alternative-fueled vehicle meeting requirements of paragraph (d)(4) after adoption of this rule, may apply for funding to offset the purchase cost, less $10,000 in accordance with paragraph (e)(3).

(e) Exemptions

The provisions of this rule shall not apply to the following:

(1) Buses used for the express purpose of providing long-distance service (out-of-District), that are generally equipped with luggage compartments, restrooms, and overhead storage.

(2) Upon demonstration to the Executive Officer, any vehicles as required pursuant to paragraph (d) for which no alternative-fuel engine and chassis configuration is available commercially or could be used.

(3) An airport fleet operator who provides taxicab pickup services at commercial airport terminals may purchase a light- or medium-duty vehicle that is not certified by CARB as ULEV or cleaner if the SCAQMD or its designated agent has not provided sufficient funding to fully offset the purchase cost of an alternative-fueled vehicle that complies with paragraph (d)(4)

less $10,000 (paid by or on the behalf of the airport fleet operator):

(A) within 10 working days after notification by the airport fleet operator of the intent to purchase such vehicle and the airport fleet operator has provided documentation that the $10,000 is immediately available for purchase of the rule compliant vehicle, or

(B) within two working days after the airport fleet operator has notified the SCAQMD or its designated agent in the event that the taxicab vehicle to be replaced is rendered inoperable due to a roadside accident and would require immediate replacement of the taxicab vehicle. In addition, the airport fleet operator must demonstrate that the $10,000 to be provided by the airport fleet operator is immediately available for purchase of the rule compliant vehicle.

(C) Notwithstanding the provisions in paragraphs (e)(3)(A) or (e)(3)(B), the airport fleet operator shall be responsible to pay for the cost of converting the new rule compliant vehicle to meet applicable taxicab vehicle specifications and all other incidental costs including but not limited to, sales tax on the $10,000 provided by the airport fleet operator, license, and registration fees.

(D) An airport fleet operator qualifying for a non-rule compliant vehicle as provided in paragraphs (e)(3)(A) or (e)(3)(B) shall purchase the non-rule compliant vehicle within 10 working days after being notified that such vehicle could be purchased or reapply for co-funding pursuant to paragraphs (e)(3)(A) or (e)(3)(B).

(4) Vehicles not certified by CARB as ULEV or cleaner that are converted to be wheelchair accessible (to meet regulations set by the Commercial Airport Authority and all Americans with Disability Act of 1990 requirements, including door height overhead clearance as well as ramp or lift design specifications) for the purpose of providing taxicab pickup services at commercial airport terminals.

(f) Compliance Auditing and Enforcement

(1) The fleet operator shall provide at the request of the District any files and/or records created to comply with subdivision (d) including fleet-specific purchase information, such as a list of official DMV registrations, and manufacturer, model-year, model, engine family number, and fuel type of each fleet vehicle. The fleet operator shall keep all required records for a minimum of two years.

(2) Any fleet operator seeking an exemption under subdivision (f) shall supply proof that their fleet is exempted from this rule when requested by the District.

(g) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances. In the event any of the exceptions to this rule is held by judicial order to be invalid, the persons or circumstances covered by the exception shall instead be required to comply with the remainder of this rule.

South Coast Air Quality Management District

(Adopted October 20, 2000)

RULE 1196. CLEAN ON-ROAD HEAVY-DUTY PUBLIC FLEET VEHICLES

(a) Purpose

For public fleets of heavy-duty vehicles operating in the South Coast Air Quality Management (District), this rule requires public fleet operators to acquire alternative-fuel heavy-duty vehicles when procuring or leasing these vehicles to reduce air toxic and criteria pollutant emissions.

(b) Applicability

This rule applies to all government agencies located in the District, including federal, state, regional, county and city government departments and agencies, and any special districts such as water, air, sanitation, transit and school districts, with 15 or more heavy-duty vehicles. This rule shall not apply to vehicles or services pursuant to paragraph (f) or vehicles subject to Rules 1192, 1193, [adopted June 16, 2000], 1194 [adopted August 18, 2000], 1195 [*proposal for school buses*] or 1186.1 [adopted August 18, 2000].

(c) Definitions

For purposes of this rule, the following definitions shall apply:

(1) ALTERNATIVE-FUEL HEAVY-DUTY ENGINE OR VEHICLE means a heavy-duty vehicle or engine that uses compressed or liquefied natural gas, propane, methanol, electricity, fuel cells, or other advanced technologies that do not rely

on diesel fuel, and has been certified by the California Air Resources Board (CARB).

(2) APPROVED CONTROL DEVICE(S) is a CARB-certified exhaust control device(s) that reduces particulate matter and possibly other precursor emissions. To be considered fitted with an approved control device(s), all diesel exhaust from the vehicle must be vented through such a device(s) that has been fitted at the time of vehicle purchase. The vehicle equipped with such a control device must use diesel fuel with a sulfur content no greater than 15 ppm.

(3) DUAL-FUEL HEAVY-DUTY VEHICLE means a heavy-duty vehicle equipped with a diesel engine that uses an alternative fuel (such as compressed or liquefied natural gas, liquefied petroleum gas, methanol, or other advanced technologies) in combination with diesel fuel to enable compression ignition. A dual-fuel engine typically uses the alternative fuel to supply 85 percent of the total engine fuel requirement on a BTU basis. A dual-fuel engine must be certified by CARB to meet an applicable optional nitrogen oxide exhaust emission standard and be fitted with a particulate matter aftertreatment control device that achieves a particulate matter emissions level no greater than the particulate matter emissions level of the latest certified M-100 methanol engine certified by CARB prior to the date of adoption of this rule.

(4) EMERGENCY OR RESCUE VEHICLE means any vehicle defined in Section 165 of the California Vehicle Code and is equipped with red lights and sirens as defined in Sections 30, 25269, and 27002 of the California Vehicle Code.

(5) FLEET VEHICLE means any heavy-duty on-road vehicle, owned or leased by a public fleet operator that totals 15 or more heavy-duty vehicles excluding vehicles exempt under paragraphs (f)(1) and (f)(2).

(6) HEAVY-DUTY VEHICLE means any vehicle having a gross vehicle weight of at least 14,000 pounds.

(7) PUBLIC FLEET OPERATOR is a person who owns, leases, or operates heavy-duty fleet vehicles in the District. A person is a federal, state, county or city government department or agency, or special district.

(8) SPECIAL DISTRICT means any public agency that provides public services such as, but not limited to, sanitation, school, transit, air, and water districts.

(9) VEHICLE means any self-propelled, motorized device that is permitted to operate on public roads through Department of Motor Vehicle registration or the federal government.

(d) Fleet Requirements

Beginning July 1, 2002, for public fleet operators with 15 or more heavy-duty vehicles, all new additions to an existing fleet, or formation of a new fleet, of heavy-duty vehicles shall be by purchase or lease of:

(1) alternative-fuel heavy-duty engine or vehicles;

(2) dual-fuel heavy-duty vehicles;

(3) dedicated gasoline heavy-duty vehicles; or

(4) If the fleet operator has an approved Technical Infeasibility Certification for this purchase or lease, as described in subdivision (e), a diesel-powered heavy-duty engine or vehicle with an approved control device and maintain that approved control device per manufacturer's specifications. The provisions of this section shall not apply to subparagraph (e)(1)(D) after June 30, 2004.

(e) Technical Infeasibility Certification Criteria and Procedures

(1) No less than 60 days prior to the date of purchase or lease of a replacement or additional heavy-duty engine or vehicle, any fleet operator seeking to comply with paragraph (d)(4) shall demonstrate the technical infeasibility of complying with paragraph (d)(1), d(2), or (d)(3) requirements by submitting a signed and dated Technical Infeasibility Certification Request to the Executive Officer and attest to the accuracy of all statements therein, that shall include:

(A) The name and address of the public fleet operator; and

(B) Current heavy-duty vehicle fleet composition, including make, model; and

(C) Demonstration that no engine and chassis/body configuration that meets the requirements of paragraphs (d)(1), (d)(2), or (d)(3) is commercially available from any manufacturer (only technical reasons for choosing a given chassis/body configuration are acceptable) or could be used in a specific application.

(D) Demonstration that an alternative-fuel refueling station for alternative-fueled or dual-fuel heavy-duty vehicles that are commercially available from any manufacturer is not available within five miles of the vehicle storage or maintenance yards, or at locations where vehicles will be home-based for extended periods of time and the refueling supply is provided through mobile means.

(E) Demonstration that vehicles complying with paragraphs (d)(1), (d)(2), or (d)(3) exceed the incremental cost-effectiveness criteria established in accordance with the most recent requirements of the Carl Moyer Program or the Mobile Source Emission Reduction Review Committee Program, whichever is greater.

(2) Within 45 calendar days of receipt of a completed Technical Infeasibility Certification Request submitted pursuant to paragraph (e)(1), the Executive Officer will either approve or disapprove the Request, in writing. The Executive Officer shall disapprove the request if it does not meet the requirements of paragraph (e)(1). If a Technical Infeasibility Certification Request is disapproved by the Executive Officer:

(A) The reasons for disapproval shall be given to the applicant in writing.

(B) Upon receipt of a notice of a disapproved Technical Infeasibility Certification Request, the fleet operator shall comply with paragraph (d)(1), (d)(2), or (d)(3).

(C) The fleet operator may resubmit a Technical Infeasibility Certification Request at any time after receiving a disapproval notification or may apply for a variance with the SCAQMD Hearing Board. (See SCAQMD Regulation V and California Health and Safety Code Sections 42350 through 42372 for information regarding variances.), but must still comply with paragraph (d)(1), (d)(2), or (d)(3) until such time as the Executive Officer approves a Technical Infeasibility Certification Request under paragraph (e)(1) or a variance is given by the SCAQMD Hearing Board.

(3) A Technical Infeasibility Certification Request is subject to a plan filing and evaluation fees as described in Rule 306.

(f) Exemptions

The provisions of this rule shall not apply to the following:

(1) Emergency or rescue vehicles operated by local, state, and federal law enforcement agencies, police and sheriffs department, fire department, hospital, medical or paramedic facility, and used for responding to situations where potential threats to life or property exist, including but not limited to fire, ambulance calls, or life-saving calls.

(2) Privately owned or operated heavy-duty vehicle fleets that provide contract services to a public agency. Nevertheless, privately owned or operated heavy-duty vehicle fleets may be required to meet other SCAQMD rules such as Rules 1192, 1193, 1194, or 1186.1.

(3) No more than ten evaluation/test vehicles per fleet, provided by or operated by vehicle manufacturer for testing or evaluation, exclusively.

(4) Any vehicle added to or replacing a vehicle in an existing fleet after the applicable implementation date of this rule, as specified in subdivision (d), as long as the purchase contract for acquisition of such vehicle is signed before the date of adoption of this rule. This exemption does not apply to the execution of options to acquire vehicles where the option is executed after the date of adoption of this rule and where vehicle delivery does not occur until after the applicable implementation date as specified in subdivision (d).

(5) Military vehicles used for tactical operations.

(6) Heavy-duty vehicles used routinely to transport materials in and out of the District.

(7) Heavy-duty vehicles operated and housed by state agencies or special districts in the Riverside County portion of the Mojave Desert Air Basin and located within the District if the vehicles are equipped with approved control devices.

(8) When the remainder of the fleet consists of heavy-duty vehicles that meet the requirements of paragraphs (d)(1) or (d)(2),

(a) For public fleets with greater than 15 but less than 100 heavy-duty vehicles, no more than three (3) heavy-duty vehicles that do not meet the requirements of Subdivision (d) of this rule may be part of the fleet at any given

time. Such vehicles shall be equipped with approved control devices.

(b) For public fleets with 100 or more heavy-duty vehicles, no more than three (3) heavy-duty vehicles that do not meet the requirements of Subdivision (d) of this rule may be part of the fleet and are garaged, housed, parked, stored at any single vehicle storage or maintenance yard at any given time. Such vehicles shall be equipped with approved control devices. A public fleet operator may deploy these vehicles and place them at any one vehicle storage or maintenance yard if the public fleet operator submits a plan to the SCAQMD demonstrating that a proportionate number of such heavy-duty vehicles is reduced at other facilities operated by the public fleet operator.

(9) Heavy-duty vehicles leased for no more than 120 days in any 12-month period by the U.S. Postal Service during the peak winter holiday period.

(10) Heavy-duty vehicles owned or operated by federal agencies, state agencies, county agencies, or special districts whose jurisdiction include areas outside of the District and the heavy-duty vehicles are garaged, housed, parked, stored or operated within the District for no more than 180 days in any 12-month period.

(g) Compliance Auditing and Enforcement

(1) The fleet operator shall provide at the request of the District any files and/or records created to comply with subdivision (d) including

fleet-specific information, such as a list of official DMV registrations, principal vehicle location, and manufacturer, model-year, model, and fuel type and usage, of each fleet vehicle. This provision shall not apply for records that have been in existence for more than one year.

(2) Any fleet operator seeking an exemption under subdivision (f) shall supply proof that their vehicle or fleet is exempted from this rule when requested by the District.

(h) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances. In the event any of the exceptions to this rule is held by judicial order to be invalid, the persons or circumstances covered by the exception shall instead be required to comply with the remainder of this rule.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Staff Report

Proposed Rule 1191 – Clean On-Road Light- and Medium-Duty Public Fleet Vehicles

June 2000

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INTRODUCTION

The South Coast Air Quality Management District (AQMD) is proposing a rule that would require the public sector fleet operations that have 15 or more light- and medium-duty vehicles to acquire lower-emitting gasoline or alternative fuel vehicles (AFVs) when procuring or leasing these vehicles in the AQMD. In addition, any new public fleets will be required to purchase lower-emitting gasoline or alternative-fueled light- and medium-duty vehicles. Examples of fleets affected by this proposal include those operated by federal, state, county, and city

agencies, as well as airports, and special districts – such as air, water, transit and school districts. Emergency vehicles are specifically exempted from this requirement, unless the AQMD Governing Board determines that sufficient refueling stations are available to the extent that their emergency response capabilities are not impaired. For the purposes of this proposed rule, emergency and rescue vehicle fleets will be exempt from rule compliance.

This proposal is based on Health and Safety Code Section 40919, which allows certain nonattainment air districts (those that are designated serious or above for ozone) to adopt measures requiring fleets to use a significant number of low-emission vehicles. A "low-emission vehicle" (LEV) is defined in Health and Safety Code Section 39037.05. This regulatory authority is being implemented in the proposed rule in a two-phase approach. In the initial first years of rule implementation, affected public fleets will be required to purchase gasoline or alternative fuel vehicles that are certified by the California Air Resources Board (ARB) as low-emission vehicles or cleaner. This LEV standard currently is approximately the same as a hydrocarbon standard twice as stringent as otherwise allowed, as specified in Section 39037.05. This requirement will become more stringent after several years of rule implementation by requiring affected fleets to purchase ultra-low-emission vehicles (ULEVs) or cleaner when a majority of vehicles sold by manufacturers are ARB certified to these vehicle categories. At that time, ULEVs will equate to approximately twice as stringent as the applicable hydrocarbon standard as defined under Section 39037.05. In addition, Section 40447.5 specifically authorizes the AQMD to regulate fleets.

Despite the significant progress that has been made in reducing both mobile and stationary emissions over the past twenty years, the South Coast Air Basin (Basin), which includes Los Angeles, San Bernardino, Riverside, and Orange Counties, continues to experience extremely serious air quality problems, dominated by motor vehicle pollution. The Basin is still the only area in the country classified by U.S.EPA as an extreme nonattainment area. Based on the latest information available, on-road motor vehicles contribute more than half of all hydrocarbons, oxides of nitrogen, and carbon monoxide to the entire emissions inventory. In addition, on-road motor vehicle pollution, specifically from two significant gasoline hydrocarbon compounds – benzene and 1,3 butadiene and exhaust emissions from diesel vehicles, has been identified as the principal source of public exposure to air toxics, based on recent work conducted by the AQMD and other agencies.

This proposed rule is being developed in an effort to reduce public exposure to motor vehicle pollution, including both toxic and ozone precursor emissions. It is intended that these benefits be surplus to existing state and federal regulations governing emission levels from on-road motor vehicles.

Public fleets have been identified in the proposed rule because government agencies have an opportunity to take a leadership position in utilizing the cleanest vehicle technologies. Many government fleets, for example, have implemented policies that promote the purchase of clean low-emission or alternative-fuel vehicles in an effort to improve air quality in their area of jurisdiction. As a result of these policies, these fleets have significant experience demonstrating the feasibility of these vehicles in normal

fleet operations. In addition, many of these fleets emit air emissions, including air toxics, into highly urbanized pedestrian breathing zones and neighborhoods adjacent or in close proximity to airports. Public fleets also make up a significant share of fleet vehicles in the region.

Proposed Rule 1191 is one of a series of rules being proposed that affect vehicle fleet operations in the AQMD. The AQMDs' objective is to promote the use of clean vehicle technologies to as many vehicle fleets as possible, not just those under consideration in Proposed Rule 1191, to maximize the air quality benefits of clean vehicle technologies. Depending on the effectiveness in the implementation of Proposed Rule 1191 and the other fleets rules under consideration, the AQMD intends to expand the scope of these rules, as feasible, to maximize the air pollution benefits of clean vehicle operation within the AQMD's four-county jurisdiction.

BACKGROUND

Two important efforts to evaluate and identify air toxics include the AQMD's Multiple Air Toxics Exposure Study II (MATES II) and the California Air Resources Board's (ARB) identification of particulate matter from diesel engine exhaust as a surrogate for all diesel exhaust emissions including hydrocarbons as toxic air contaminant (TAC). The development of this proposed fleet rule is in large measure being driven by the results of these two very important research and regulatory efforts. The development of the fleet rule is also affected by recent state and federal rulemaking efforts and actions that are intended to, or have resulted in, lowering on-road mobile source emissions by reducing tailpipe emissions and/or

requiring the sale or purchase of alternative fuel vehicles. Some of these more important rulemaking activities, as well as their significance to the proposed fleet rule, will be described, including the ARB's Low-Emission Vehicle (LEV) Program and the U.S. Energy Policy Act (EPAct) requirements.

MATES II

In November 1999 the AQMD issued a draft final report for the MATES II study. The objectives of this study were to monitor and evaluate urban air toxics, as well as update the toxics emission inventories for the Basin and conduct air toxic dispersion modeling to simulate the monitored data. During the course of the study, the ARB listed diesel particulate emissions as an air toxic contaminant. As such, the study provided an analysis of the potential air toxic impacts of diesel emissions. The study represented one of the most comprehensive air toxics programs ever conducted in an urban environment. The scope of the study included the monitoring of more than 30 toxic air pollutants at 24 sites over a one-year period ending last spring. The AQMD collected more than 4,500 air samples and together with the ARB performed more than 45,000 separate laboratory analyses of these samples.

The findings of this study indicated that the cancer risk from some air toxics in the Basin has declined by as much as 75 percent over the last decade. However, it also showed that based upon more extensive monitoring of the variety of toxic compounds in the air, the current cancer risk from toxic air pollution averages about 1,400 in a million in the region. As shown in Figure 1, the study found that 71 percent of this cancer risk is attributable to diesel

particulate. Other important toxic species contributing significantly to this cancer risk, originating from both gasoline- and diesel-powered mobile sources as well as stationary sources, are 1,3 butadiene (8 percent of risk), benzene (7 percent of risk), and carbonyls which include formaldehyde and acetaldehyde (3 percent of risk). One of the primary objectives of proposed Rule 1191, based on the findings of this study, is to reduce the contribution of overall toxic risk of diesel exhaust emitted by public fleets and the gaseous air toxic compounds associated with gasoline vehicles in the region, by accelerating the implementation of currently available low-emission vehicle technology.

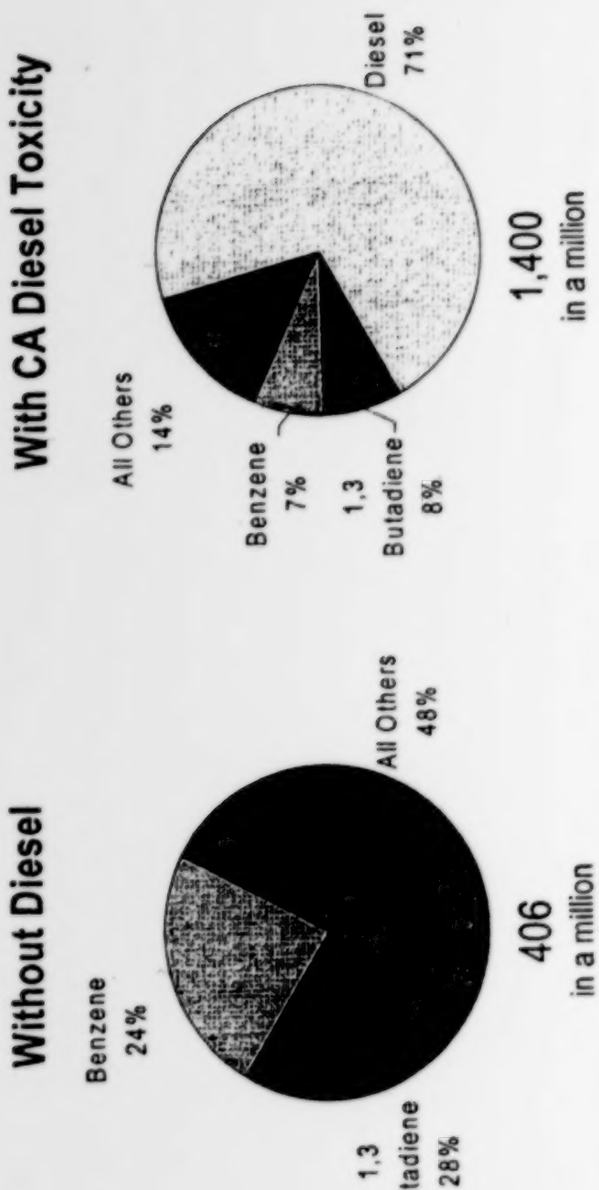

Figure 1

Estimated Average South Coast Air Basin Toxic Risk
Contributions based on findings from the MATES-II Study

ARB Identification of Diesel Emissions as a Toxic Air Contaminant

In the early 1980's, the ARB established one of the nation's first comprehensive state air toxic programs – the California Air Toxics Program. Its goal is to protect public health by reducing air toxic emissions that pose the highest risk to Californians. This requires two separate steps. During the first step, risk assessment, the ARB identifies the highest risk substances called toxic air contaminants. In the second step or risk management step, the ARB and local air pollution control districts investigate and adopt measures requiring air toxics sources to minimize risk to public health.

There are approximately 200 substances on the TAC list. On August 27, 1998, the TAC was expanded to include particulate emissions from diesel-fueled engines, culminating a near-decade long scientific investigation into the health effects of exposure to the fine particles and other pollutants in diesel exhaust. Similar to the findings of the MATES II study, the ARB identification of diesel exhaust particulate matter as a surrogate for all diesel exhaust emissions, as a TAC provides another driving force for the AQMD to pursue the development of a cleaner vehicle fleet rule as a strategy to mitigate public exposure to this pollutant.

ARB's Low-Emission Vehicle Program

In adopting the LEV regulations in 1990-91, the ARB established the most stringent exhaust regulations ever for light- and medium-duty vehicles. The regulations include three primary elements – (1) tiers of exhaust emission standards for increasingly more stringent

categories of low-emission vehicles, (2) a mechanism requiring each manufacturer to phase in a progressively cleaner mix of vehicles from year to year, and (3) a requirement that a specified percentage of passenger cars and lighter light-duty trucks be zero-emission vehicles (ZEVs).

Since the beginning of ARB's LEV rule implementation in 1994, light- and medium-duty vehicle original equipment manufacturers (OEM) have produced an array of vehicle models with varying types of control technologies that reduce vehicle emissions in varying degrees. The dominant emission control strategy has been the development of sophisticated engine control systems (computerized control of the vehicle fuel system) in combination with extremely efficient aftertreatment hardware (advanced catalytic converters) as applied towards gasoline vehicles. In addition, these control technologies have also been employed on a number of commercially available alternative fuel vehicles powered by natural gas, M85 (a mixture of 85 percent methanol and 15 percent gasoline), and liquefied petroleum gas. As mentioned above, OEMs have been required, and in some cases have voluntarily chosen, to produce for sale limited numbers of dedicated electric vehicles and hybrid electric vehicles. One of the objectives of the proposed rule is to require the purchase of the cleanest vehicles for fleets, taking advantage of the varying levels of emission control relative to the wide array of vehicles being produced for compliance with the LEV regulation. It is noteworthy that, other than zero-emission vehicles, the cleanest internal combustion engine light-duty vehicle commercially available today is the year 2000 model year Honda Civic, powered by compressed natural gas. This vehicle is 90 percent cleaner than the average

new 2000 model year vehicle, and it is certified as a super-ultra-low-emission vehicle (SULEV), according to ARB's LEV regulations.

Attachment 5 tabulates exhaust standards for non-methane organic gases (NMOG), carbon monoxide (CO), and oxides of nitrogen NOx emission standards specified in the ARB LEV Regulations, where LEV-I applies to model years 1998 through 2003 and LEV-II applies to subsequent model years, beginning with 2004. These emission standards apply to the vehicle manufacturers. The emission standards illustrate the relative magnitude of exhaust emissions for the various categories of low-emission vehicles, and form the basis for emission reductions that are expected on a per-vehicle basis as a result of PR1191.

U.S Energy Policy Act Requirements

The U.S. Energy Policy Act (EPAct) is administered by the U.S. Department of Energy (DOE) and is designed to reduce dependence on foreign oil supplies and increase the use of alternative fuel vehicles. By passing this legislation, Congress recognized that fleets are uniquely suited for introducing new fuel and vehicle technologies. According to U.S. DOE, fleet vehicles typically accumulate higher mileage than private vehicles and are replaced more frequently. Basically, beginning in 1997, federal, state, and alternative-fuel-provider fleet operators must acquire new alternative fuel vehicles as a percentage of new vehicle acquisitions. This percentage starts out at 10 to 33 percent depending on fleet type, and gradually increases over time. By the year 2002, EPAct alternative fuel vehicle purchase requirement is 75 percent for federal and state

fleets, and 90 percent for fuel provider fleets. Municipal and private fleet operator participation in EPAct is currently in question; U.S. DOE is due to rule on this issue by April 2000. If these fleets are ultimately included in EPAct, alternative fuel vehicle purchase requirements for these fleet operators will probably begin in 2002.

Basically, EPAct requirements are limited to fleets with 50 or more light- and medium-duty vehicles (up to 8,500 lb. GVWR), operating at least 20 of these vehicles in cities that had a population of at least 250,000 at the time of the 1980 U.S. census. In general, urbanized areas with the AQMD meet this criterion and are therefore subject to EPAct requirements. Examples of alternative fuels that can be used to power fleet vehicles under EPAct include methanol, ethanol, natural gas, liquefied petroleum gas, hydrogen, and electricity.

EPAct set a regulatory precedent by requiring large-scale purchases of alternative fuel vehicles by government and certain private fleets. The regulations have been in place since 1992, and thus EPAct-affected fleets, which constitute a significant proportion of vehicle fleets within the scope of the AQMD's proposed fleet rule, have been preparing for and have been gaining significant experience in the operation of light- and medium-duty alternative fuel vehicles. In essence, the AQMD's proposed fleet rule builds upon federally mandated alternative fuel fleet requirements that have been in place for nearly a decade.

Since EPAct requires certain public fleets and some private fleets to purchase alternative fuel vehicles, Proposed Rule 1191 has different requirements on public fleets that will allow purchases of cleaner gasoline powered vehicles or alternative fuel vehicles and would not be

considered duplicative within the meaning of Health and Safety Code Section 40727.2

GENERAL DESCRIPTION AND EXPLANATION OF RULE REQUIREMENTS

Applicability

The rule applies to public fleets operating in the AQMD with 15 or more on-road light- and medium-duty vehicles. These fleets include all government/public fleets operating within the boundaries of the AQMD. Examples of these fleets include those operated by federal, state, county, city, special district, regional agency, airports, and joint-power authorities.

Many government entities have begun converting to alternative fuels or to other clean vehicles in their fleets, both as a result of mandates and as a result of incentives programs. Cities and counties in the South Coast are granted AB2766 subvention funds specifically to reduce motor vehicle air pollution. Government fleets are thus well-suited for early implementation of clean vehicle requirements. It is also important for governments to play a leadership role in reducing air pollution from motor vehicles. Precedent for such an approach is in the Energy Policy Act. Public sector fleets account for about 25 percent of the total fleet population. They also tend to be in more urbanized areas where the benefits of reducing emissions will be the greatest.

Vehicle Purchase Requirements

The primary air quality objective of Proposed Rule 1191 is to reduce air emissions and toxic risk levels within the

AQMD. For light- and medium-duty gasoline vehicles, VOCs including benzene and 1,3-butadiene are the primary hydrocarbon compounds that have significant contributions to the overall toxic risk level. For medium-duty vehicles operating on diesel engines, particulate emissions primarily contribute to overall toxic risk levels.

The rule requires the purchase of clean low-emission vehicles by public agencies operating 15 or more light- and medium-duty vehicles. Under California Health and Safety Code Section 40919, certain nonattainment air districts (those that are designated serious or worse for ozone) may adopt measures requiring fleets to use a significant number of low-emission vehicles. California Health and Safety Code Section 39037.05 defines a low emission vehicle as "a motor vehicle which has been certified by the state board [ARB] to meet all applicable emission standards and which meets at least one of the following additional requirements:

(a) Is capable of operating on methanol, as determined by the state board, and will have an adverse impact on ambient ozone air quality not greater than a vehicle which meets the requirements of subdivision (c).

(b) Is capable of operating on any available fuel other than gasoline or diesel and, in the determination of the state board, will have an adverse impact on ambient ozone air quality not greater than a vehicle operating on methanol.

(c) Operates exclusively on gasoline and is certified to meet a hydrocarbon exhaust emission standard which is at least twice as stringent as otherwise applicable to gasoline vehicles of the same year and class."

Given the specific criteria set forth in Health and Safety Code Section 39037.05, diesel-fueled vehicles would not be considered "low-emission vehicles." It is proposed that compliant light- and medium-duty vehicles be powered by any fuel-type engine that meets the definition of LEV as provided in Section 39037.05. A qualifying purchase may be a new vehicle or a used vehicle that meets these requirements. For vehicles that are exclusively gasoline-powered, the vehicle must meet the requirements of Section 39037.05(c).

To meet the requirements of Section 39037.05, staff is proposing that beginning July 1, 2001, public fleets be required to purchase only vehicles meeting ARB certification of low-emission vehicles or cleaner during the initial first years of rule implementation. As mentioned previously, ARB will require vehicle manufacturers to sell vehicles meeting various tiers of exhaust emission standards for hydrocarbon, carbon monoxide, and oxides of nitrogen. In order of increasing stringency, ARB vehicle emission categories include: Tier 1, transitional low-emission, low-emission, ultra-low emission, super-ultra-low-emission, and zero-emission vehicles. Over time, the ARB low-emission vehicle regulation will require the mix of vehicles sold by manufacturers to become cleaner as a result of compliance with fleet average hydrocarbon standards. By requiring the acquisition of ARB-certified low-emission vehicles or cleaner when public fleets add or replace vehicles, the purchase of higher polluting Tier 1 and transitional-low-emission vehicles will be prevented. Taking into account the emission standards for each individual vehicle emission category as well as the fleet average hydrocarbon level, staff believes that by restricting fleet acquisitions to ARB certified low-emission

vehicles or cleaner, AQMD is implementing Section 39037.05(c) of the Health and Safety Code. Relative to vehicle purchases, any passenger car or light-duty vehicle certified as an LEV or better may be purchased. The low-emission vehicle standard has been in place since 1998.

After the initial first years of rule implementation, as noted previously, public fleet acquisitions of light- and medium-duty vehicles will be restricted to vehicles meeting ARB certifications of ultra-low-emission vehicles or cleaner. This will be triggered when at least 50 percent of the vehicle sales of light- and medium-duty vehicles, determined separately for each of these categories, are ARB certified as ultra-low-emission vehicle or cleaner. This is projected to occur around 2004, using ARB vehicle sales projections. Staff believes that this requirement is also consistent with Section 39037.05(c) of the Health and Safety Code since the highest emission standards (namely Tier 1 and transitional low-emission vehicle or TLEV) will no longer be allowed under the ARB LEV program.

In order to implement these fleet acquisition requirements, the AQMD will publish a list of vehicle/engine models that meet ARB certifications of low-emission vehicle and cleaner, or ultra-low-emission vehicle or cleaner. It is intended that fleet managers will simply choose vehicles from this list for rule compliance purposes when vehicles need to be acquired for their vehicle fleet. Since manufacturers certify their vehicles with ARB throughout the year, the list of compliant vehicles will be updated every six months. Attachment 3 lists model year 2000 vehicles that would qualify for the proposed rule, if it were in effect today. In addition, ARB-certified vehicles not on the list would also qualify.

MODEL AVAILABILITY

AQMD staff believes that, based on ARB projections of the numbers of low-emission vehicles that will be available now and in the future as well as the proposed July 1 2001 implementation date of the rule, there should generally be sufficient model availability for compliance with rule requirements in the light- and medium-duty vehicle categories. The July 1, 2001 implementation date was specifically chosen to be consistent with the fiscal year budgeting process of most government agencies. For certain types of specialty medium-duty vehicles (engine-certified), ARB's LEV regulation may not require manufacturers to sell sufficient amounts of vehicles or models prior to this date to satisfy fleet operational needs and still comply with PR1191 purchase requirements. However, beginning with model year 2002, ARB's LEV regulation specifies that manufacturers must sell 100 percent of their engines to meet the LEV emission level. With the July 1, 2001 implementation date, procurement of engine certified specialty vehicles in the medium-duty category will not be a significant issue, since manufacturers will be offering model year 2002 compliant engines beginning in the later part of 2001.

Notwithstanding the above discussion, there still may be a model availability issue since fleet operators are indicating that there are potentially many specialty diesel-powered medium-duty vehicles where the availability of corresponding gasoline or alternative fuel vehicles is uncertain. (Note that PR1191 only allows compliant gasoline and alternative-fueled vehicles to be purchased.) To address this issue, non-compliant vehicle purchases will be allowed if vehicle fleets have sufficient prior purchases (before Proposed Rule 1191 implementation) of alternative-fueled

ultra-low-emission vehicles or cleaner, or the fleet operator purchases sufficient numbers of alternative-fueled super-ultra-low-emission vehicles or cleaner, according to a specific formula. This provision also serves the dual purpose of recognizing fleets that have taken a leadership role by purchasing clean vehicles prior to Proposed Rule 1191 implementation. Despite the alternative fuel purchase crediting mechanism, some public fleets may not be able to use an alternative fuel light-duty vehicle so that a non-compliant medium-duty vehicle could be purchased. As such, PR 1191 will allow for a purchase of non-compliant medium-duty vehicle if there is a demonstration of such a need.

A comment was made that some entities purchase used vehicles and convert these vehicles to operate on alternative fuels with CARB certified conversion kits. In recognition of such activities, PR 1191 would allow for such purchases if the conversion was to meet the "low-emission vehicle" standard or cleaner. At the time that ULEV purchases would be required, conversion kits used on used vehicles shall meet ULEV emission standards.

Exemptions

With regard to vehicle acquisitions that are exempted from rule requirements, the proposed rule contains language that is intended to allow fleets to continue purchasing current gasoline or diesel powered vehicles for emergency vehicle applications. Emergency vehicles are basically vehicles used in situations where threats to life or property exist. At this time, staff is proposing to exempt the types of emergency vehicles as defined in Vehicle Code Section 165 that are equipped with at least one steady

burning red warning lamp as permitted by Vehicle Code Sections 25269 and 27002 to be considered emergency vehicles for PR1191 exemption purposes. In addition, the AQMD would consider undercover and police surveillance vehicles to qualify as emergency vehicles; however, vehicles used for the primary purpose of enforcing parking ordinances or used for personnel transportation would be subject to the proposed rule.

Additional categories of vehicles exempted from the proposed rule include heavy-duty vehicles, manufacturer evaluation/test vehicles, and vehicles acquired as a result of signed contract agreements as of the date of adoption of the proposed rule. PR1191 is also not intended to be applicable to private vehicle fleets that are operating on behalf of a public agency in providing contract services to the public agency. Examples of these companies that may use their own fleet vehicles to provide the contracted service(s) to the public agency include landscape service companies and office supply companies.

SUMMARY OF DATA COLLECTION/ANALYSIS OF FLEET CHARACTERISTICS

Attachment 2 summarizes vehicle population data of public fleets potentially affected by the proposed rule. These data include information solicited from hundreds of affected fleets operating within the AQMD involving a variety of applications. These fleets include special district (e.g., utility) and municipal fleets, with functions regarding water supply/runoff, electric power supply, public works, and other city maintenance departments. There are also many state and federal fleets, including local postal

delivery and Caltrans fleets. In addition, airports operate their own fleets for a variety of functions.

The data have been compiled using various sources of information, including direct surveying of public fleets, existing reports which include information on fleet vehicle population characteristics, associations/organizations that represent public fleets, and public agencies including the California Department of Motor Vehicles, California Energy Commission, ARB, U.S. EPA Region IX, and the U.S. Department of Energy.

COST ANALYSIS

Fleet Cost Impacts

The cost impacts of the proposed rule are expected to be minimal since the cleaner gasoline vehicles are promoted by the rule. Staff has evaluated the cost of wide variety of current vehicle models that are ARB certified to the low-emission vehicle level or cleaner and has determined that this cost range basically coincides with current vehicle costs. In addition, proposed rule provisions as previously discussed to address model unavailability of compliant vehicles for specialty diesel-powered medium-duty vehicle applications will also minimize cost impacts associated with rule implementation. Staff is working on a funding mechanism document, which will be available separately, and it will provide additional information on funding sources and needs.

Incremental Cost Analysis

Health and Safety Code Section 40920.6 requires an assessment of incremental cost effectiveness for proposed

regulations relative to ozone, CO, SOx, NOx, and their precursors. Incremental cost effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential control options that can achieve the same emission reduction goal of a regulation. Compared to Proposed Rule 1191, incremental cost effectiveness of requiring alternative fuel vehicles for the first three compliance years is $133,900 per ton of combined pollutants (VOC, NOx, and one-seventh of CO) assuming no funding. An approximate 85 CNG refueling stations would be required for the alternative fuel light- and medium-duty vehicles (19,812 and 6,246, respectively).

Funding Programs

For those public fleets that pursue the acquisition of AFVs, financing is a central issue in any effort to acquire and use these vehicles. There are a wide variety of incentives offered to encourage the expanded use of AFVs. Federal, state, and local monies/incentives are available that could potentially be used to offset costs incurred by rule compliance. Generally, incentives are available to fund differential (premium) capital costs, as well as subsidizing the capital cost of AFV refueling equipment or facilities, which would lead to significantly lower fuel cost. It should also be noted that CNG or LPG refueling equipment can potentially be installed at no capital cost by means of a long-term contract arranged between the fleet and the alternative-fuel provider. Private funds and in-kind services may also be available that would result in lower overall fuel costs.

A list of funding sources, including identification of public or private sources, purpose of funds, limitations, contact person, and relevant Internet sites follows. It is a compiled from Internet Web sites and published material based on staff research and input received from personal contacts from relevant sources in government and private organizations. The purpose in providing the information is to facilitate use of the funds for Proposed Rule 1191 compliance.

Federal Incentives and Regulations

U.S. Department of Energy (DOE) 1000 Independence Avenue, SW, Washington, DC 20585. General telephone number: (202) 586-5000, fax (202) 586-5049.

Energy Policy Act of 1992 (EPAct). Congress passed EPAct, or Public Law 102-486, on October 24, 1992, to accelerate the use of alternative fuels in the transportation sector. With EPAct in place, DOE's primary goals are to decrease the nation's dependence on foreign oil and increase energy security through the use of domestically produced alternative fuels. DOE's overall mission is to replace 10% of petroleum-based motor fuels by the year 2000 and 30% by the year 2010. EPAct mandates **federal, state, and alternative fuel provider fleets** to purchase AFVs.

Federal fleets must follow guidelines established in Executive Order 12844 (April 21, 1993) and subsequently reinforced by Executive Order 13031 (December 13, 1996). An AFV guide for federal fleets is located at http://www.whitehouse.gov/WH/EOP/OMB/html/mheda/afvguide.html. State and fuel provider fleets must meet the

requirements outlined in the Alternative Fuel Transportation Program, Final Rule [10CFR Part 490], located at the Web site: http://www.afdc.doe.gov/ottdocs/fprovrule.pdf.

Clean Cities Program. DOE's Clean Cities Program coordinates voluntary efforts between locally based government and industry to **accelerate the use of alternative fuels and expand AFV refueling infrastructure**. For more information, please see the Clean Cities Section of this guide on pages 1-13.

State and Alternative Fuel Provider Fleets AFV Credits Program. Congress created the credits program to encourage fleets or covered fleet operators to use AFVs early and aggressively. Credits are allocated to state fleet operators and covered Alternative Fuel Provider fleet operators when AFVs are acquired over and above the amount required, or earlier than expected. Since credits can be traded and sold, fleets have the flexibility to acquire AFVs on the most cost-effective schedule without impeding the achievement of EPAct national oil displacement goals. Please see the AFV Acquisition and Credits Web site for more information on the credits program at www.ott.doe.gov/credits, or call the National Alternative Fuels Hotline at (800) 423-1DOE or (800) 423-1363 or email at hotline@afdc.nrel.gov.

ANOPR. DOE published an advance notice of proposed rulemaking (ANOPR) for **AFV acquisition requirements for private and local government fleets** on Friday, April 17, 1998. Programs potentially created by the ANOPR would help ensure that DOE meets its energy replacement goals. Public feedback will be incorporated into the rulemaking, which was scheduled to be finalized by April 1, 2000. A copy of the ANOPR is available on the

Federal Register Web site at http://www.access.gpo.gov/su_docs/aces/aces140.html or directly from the Web site at http://www.ott.doe.gov/pdfs/anopr.pdf.

State Energy Program. States will promote the conservation of energy, reduce the rate of growth of energy demand, and reduce dependence on imported oil through the development and implementation of a comprehensive State Energy Program. The State Energy Program is the result of the consolidation of two formula grant programs – the State Energy Conservation Program and the Institutional Conservation Program. The State Energy Program includes provisions for competitively awarded financial assistance for a number of state-oriented special project activities, including alternative fuels. In addition to funding for special project activities, states may choose to allocate base formula funds to program activities to increase transportation efficiency, including programs to accelerate the use of alternative transportation fuels for government vehicles. For more information, contact your State Energy Office or the DOE Regional Office for your region, listed under the Points of Contact section for your state, or contact Ron Santoro at DOE Headquarters at (202) 586-8296.

AQMD Incentives

Motor Vehicle Registration Fees (AB 2766 funding)

Mobile Source Air Pollution Reduction Review Committee's (MSRC) Discretionary Funds. This annual work program, that typically includes an HDV incentive program, pays the incremental cost for the purchase of new OEM alternative-fuel engines and vehicles. For LDVs the incentives for dedicated alternative-fuel OEM vehicles are based on

emissions certification: $5,000 for ZEVs, $3,000 for ULEVs, $1,000 for LEVs. Contracts are with OEMs; consumer price includes incentive. The current program sunsets January 1, 2001.

Thirty percent of the funds collected each year from a $4 surcharge on vehicle registration created by **AB 2766** (Sher) goes to the Mobile Source Air Pollution Reduction Review Committee **(MSRC)** to be used to implement programs to reduce mobile source emissions. Managers of the program have apportioned the available funding into several technology-specific categories, including: heavy-duty vehicles; zero-emission/ultra-low emission vehicles; research, development and demonstration of advanced low-emission transportation technologies; transportation control measures; and intelligent transportation systems.

The AQMD contact is Ray Gorski (MSRC Technical Advisor) at 909-396-2479.

Local Government Subvention Funds

Forty percent of the **AB 2766** funds collected go to cities and counties based on a pro-rated share of population and must be used to reduce mobile source emissions. This totals about $18 million per year. Cities can use their funds to purchase alternative-fuel vehicles or engines. While these funds are used primarily by municipalities for their own projects, these monies can be allocated by the city for public-private partnerships to pursue AFV and EV projects. Funds not expended carry over from year to year. The AQMD staff contacts are Larry Rhinehart (AQMD) at 909-396-3780 and Oscar Abarca (AQMD) at 909-396-3242.

Utilities/Private Incentives

Ford Motor Company is offering a $2,000 incentive on its dedicated F-Series NGVs and dedicated and bi-fuel Econoline NGVs. Incentives for the Crown Victoria NGV range from $1,500 to $2,025 depending on the purchase of Ford's Extended Range Package. Other incentives include $1,500 for the bi-fuel propane F-Series pickup and bi-fuel propane Econoline Van, and $1,000 for the Taurus Flexible Fuel Vehicle (FFV). For more information on pricing and incentives for fleets, contact Ford at 877-ALT-FUEL or at http://www.fleet.ford.com.

EMISSION BENEFITS

The goal of the proposed fleet rule is to generate emission benefits beyond or surplus to existing and proposed on-road mobile source rules from ARB and U.S. EPA. These emission benefits are expected to consist of reduced toxic exposure to certain types of chemical species, including but not limited to diesel particulate matter, 1,3 butadiene, benzene, and carbonyls (formaldehyde and acetaldehyde). Emission benefits may also include reduced generation of criteria pollutants including hydrocarbon, carbon monoxide, and oxides of nitrogen. Since the release of the preliminary draft report, AQMD staff received more detailed information on the vehicle population for many public fleets. This information indicated that the original public fleet vehicle population estimate was somewhat higher than actual. Thus, the current emission benefits estimated are somewhat lower than those estimated in the preliminary draft report. The emission benefits are estimated for the year 2010 to be as follows:

2010 EMISSION BENEFITS (t/yr)		
Hydrocarbons	**Carbon Monoxide**	**Oxides of Nitrogen**
6.2	252	1.45

The proposed fleet rule is specifically based on achieving emission reductions beyond the ARB Low Emission Vehicle regulation. For light- and medium-duty vehicles, ARB Low Emission Vehicle (LEV I/II) regulations basically require manufacturers to sell vehicles certified to various emission-based categories, with a specific set of NMOG (basically hydrocarbon), carbon monoxide (CO), and oxides of nitrogen (NOx) emission standards assigned to each category. These categories, in descending order of emissions, are Tier 1, transitional low-emission, low-emission (LEV), ultra-low-emission (ULEV), super-ultra-low-emission (SULEV), and zero-emission vehicles (ZEV). The ARB LEV I/II regulations achieve emission reductions by requiring manufacturers to sell progressively cleaner mixes of vehicles over time.

For passenger cars and light-duty trucks, manufacturers sell a specific mix of vehicles certified to the various categories of low-emission vehicles to ensure compliance with a fleet-average NMOG emission level. Emission reductions are achieved over time by the gradual reduction of this fleet average NMOG standard. The fleet-average NMOG emission level for passenger cars, for example, is specified at 0.07 g/mi for the 2001 model year. This level is reduced annually, lowering to 0.035 g/mi for the 2010 model year. In the medium-duty vehicle category, the ARB LEV regulation achieves emission reductions by requiring

all vehicles to be certified to more stringent emission categories in specified model years (i.e., LEV in 2002 and ULEV in 2004). Notwithstanding the requirement schedule, medium-duty vehicle manufacturers also have the flexibility, similar to that of light-duty vehicles, to balance the sale of higher emitting vehicle models (e.g., vehicles certified to Tier-1) with vehicles certified to more stringent emission standards (e.g., vehicles certified to ULEV).

Emission reductions of the proposed fleet rule will be the result of affected vehicle fleets purchasing a cleaner mix of vehicles than they would have otherwise purchased. Specifically, fleets are required to purchase vehicles certified to the LEV category or cleaner. Using ARB manufacturer sales projections and staff projections of low-emission vehicles to be purchased by fleets as a result of the proposed fleet rule, corresponding fleet average emission rates by pollutant can be calculated and combined with vehicle population data to estimate overall emission benefits. It should be noted that at some point in the future, which is assumed to be 2004 for emission benefit quantification purposes, the proposed rule would restrict vehicle fleet purchases to ULEV or cleaner. This more stringent requirement is triggered when the percentage of manufacturer sales of ULEV or cleaner vehicles will be 50 percent or greater. The year 2004 was chosen based on ARB manufacturer sales projections.

COMPLIANCE AUDITING AND ENFORCEMENT

PR1191 will require that affected public agencies keep sufficient records to document to document [sic] rule compliance, and that these records be maintained for a minimum of two years. The AQMD intends to audit these records at

the vehicle fleet location or by requesting appropriate documents to be submitted to the AQMD for review. The specific records to be kept by vehicle manufacturers include vehicle purchase date, vehicle make, model, model year, and ARB engine family number. If a public agency is found to be in non-compliance with rule requirements, then the public agency will be subject to penalties specified in Health and Safety Code Division 26, Part 4, Chapter 4, Article 3. The AQMD also plans to develop an enforcement guideline document that will stress the implementation of corrective actions by public fleets rather than punitive monetary penalties during the initial years of rule implementation, for first time violators.

To facilitate compliance by affected public agencies and minimize AQMD enforcement actions, any procurement materials that are used to acquire vehicles by the public agency (e.g., Request for Proposals, Request for Bids, and Request for Quotations) must include language that requires only Rule 1191 compliant vehicles be supplied to the public agency. For example, the following language could be used; "Vehicles shall be certified as Low emission Vehicle (LEV), Ultra-Low-Emission Vehicle (ULEV), Super-Ultra-Low-Emission Vehicle (SULEV), or Zero-Emission Vehicle (ZEV) by the California Air Resources Board, and shall comply with all applicable state and federal regulations."

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Staff Report

Proposed Rule 1193 – Clean On-Road Residential and Commercial Refuse Vehicles

June 2000

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INTRODUCTION

The South Coast Air Quality Management District (AQMD) is proposing Rule 1193 (PR1193) to require fleets with 15 or more refuse collection vehicles (refuse trucks) operating in the District to acquire less-polluting vehicles when procuring or leasing these vehicles. This proposed rule applies to refuse collection vehicles operated by government agencies as well as privately owned refuse collection fleets that collect solid wastes, yard waste, or recyclable materials. For the purposes of the proposed rule, refuse collection vehicles are heavy-duty vehicles that collect solid waste, yard wastes, or recyclable materials from residential or commercial establishments, and private or publicly owned transfer stations.

This proposal is based on Health and Safety Code Section 40447.5, which was promulgated in 1987. Specifically, Health and Safety Code Section 40447.5 allows the AQMD

to require operators of public and commercial fleets, consisting of 15 or more vehicles, to purchase vehicles powered by methanol or other equivalently clean burning alternative fuel, when adding or replacing vehicle(s) to their fleet. Section 40447.5 specifically authorizes the AQMD to regulate fleets of 15 or more vehicles, operating substantially in the AQMD. This proposal is also based on Health and Safety Code Section 40919, which allows certain nonattainment air districts (those that are designated serious or above for ozone) to adopt measures requiring fleets to use a significant number of low-emission vehicles.

Despite the significant progress that has been made in reducing both mobile and stationary emissions over the past twenty years, the South Coast Air Basin (Basin), which includes Los Angeles, San Bernardino, Riverside, and Orange Counties, continues to experience extremely serious air quality problems, dominated by motor vehicle pollution. The Basin is still the only area in the country classified by U.S. Environmental Protection Agency (EPA) as an extreme ozone nonattainment area. Based on the latest information available, on-road motor vehicles contribute more than half of all hydrocarbons, oxides of nitrogen, and carbon monoxide to the entire emissions inventory. In addition, on-road motor vehicle pollution, specifically from diesel vehicles, has been identified as the principal source of public exposure to air toxics, based on recent work conducted by the AQMD and other agencies.

This proposed rule is being developed in an effort to reduce public exposure to air pollution emitted from refuse collection vehicles, including toxic particulates, and ozone precursor emissions. Many of these fleets emit pollutants, including air toxics, into heavily urbanized areas, where

improvements in air quality are critical given environmental justice and other concerns.

Refuse collection vehicles are covered in this proposed rule as part of an overall effort by the AQMD to reduce toxic, particulate, and ozone precursor emissions from public and private fleets operation in the AQMD. Refuse collection vehicles, in particular, represent an important opportunity to reduce these emissions, because of 1) the potential for centralized refueling, and 2) the availability and successful commercial use of lower-emitting refuse trucks.

Proposed Rule 1193 is one of a series of rules being proposed that affect vehicle fleet operations in the District. The AQMD's objective is to promote the use of less-polluting vehicle technologies. Depending on the effectiveness of the implementation of Proposed Rule 1193 and the other fleet rules under consideration, the use of less-polluting technology may spread to other types of fleets.

BACKGROUND

Two important efforts to evaluate and identify air toxics are: (1) the AQMD Multiple Air Toxics Exposure Study II (MATES II); and (2) the California Air Resources Board's (ARB's) identification of particulate matter from diesel engine exhaust (as a surrogate for all diesel exhaust emissions including hydrocarbons) as a toxic air contaminant (TAC). The development of Proposed Rule 1193 is the result of these regulatory research efforts and the need for further criteria pollutant reductions. The development of the proposed rule is also affected by recent state and federal rulemaking efforts and actions that are intended to, or have resulted in, lowering on-road mobile source

emissions by reducing tailpipe emissions and/or requiring the sale or purchase of alternative fuel vehicles.

MATES II

In March 2000, the AQMD Governing Board approved the release of the final report of the MATES II study. The objectives of this study were to monitor and evaluate urban air toxics, update the toxics emission inventories for the Basin, and conduct air toxic dispersion modeling to simulate the monitored data. During the course of the study, the ARB listed diesel particulate emissions as a toxic air contaminant. As such, the study provided an analysis of the potential air toxic impacts of diesel emissions. The study represented one of the most comprehensive air toxics programs ever conducted in an urban environment. The scope of the study included the monitoring of more than 30 toxic air pollutants at 24 sites over a one-year period ending in the spring of 1999. The AQMD collected more than 4,500 air samples, and together with the ARB, performed more than 45,000 separate laboratory analyses of these samples.

The findings of this study indicated that the cancer risk from some air toxics in the Basin has declined by as much as 75 percent over the last decade. However, it also showed that based upon more extensive monitoring of the variety of toxic compounds in the air, the current potential cancer risk from toxic air pollution averages about 1,400 in a million in the region. As shown in Figure 1, the study found that about 71 percent of this cancer risk is attributable to diesel particulate. Other important toxic species contributing significantly to this cancer risk, originating from both gasoline- and diesel-powered mobile sources as

well as stationary sources, are 1,3 butadiene (8 percent of risk), benzene (7 percent of risk), and carbonyls, which include formaldehyde and acetaldehyde (3 percent of risk). One objective of proposed Rule 1193, based on the findings of this study, is to reduce the contribution of overall toxic risk of diesel engine exhaust emitted by refuse collection fleets operating in the region, by accelerating the implementation of currently available less-polluting vehicle technology.

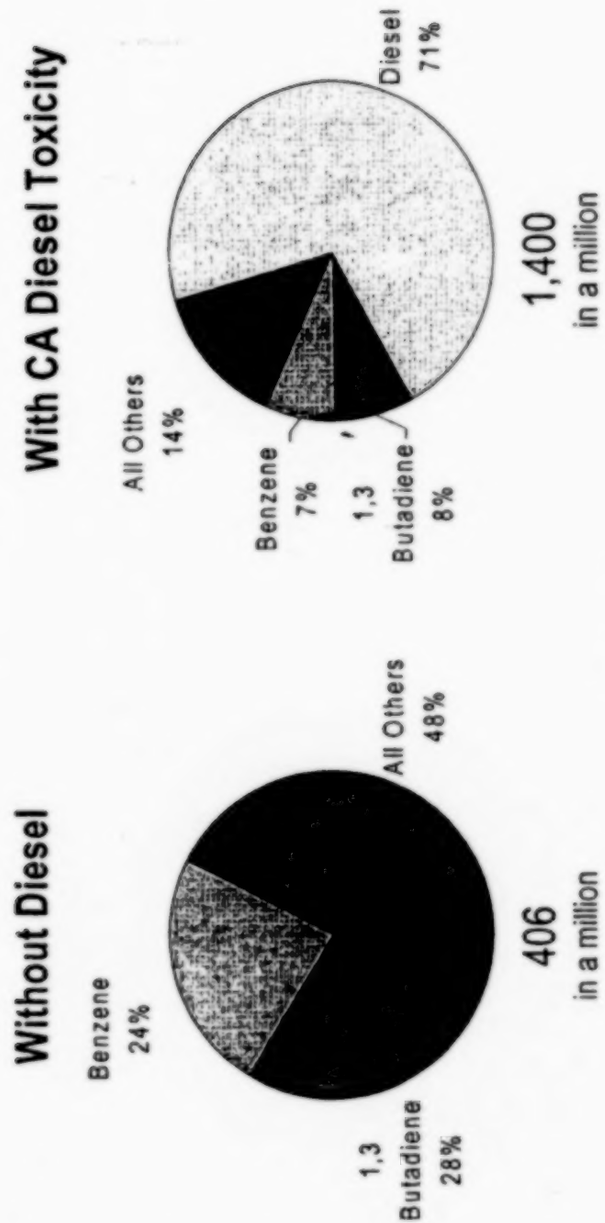

Figure 1

Estimated Average South Coast Air Basin Toxic Risk
Contributions based on findings from the MATES-II Study

ARB Identification of Diesel Emissions as a Toxic Air Contaminant

In the early 1980s, the ARB established one of the nation's first comprehensive state air toxics programs – the California Air Toxics Program. Its goal is to protect public health by reducing toxic air emissions that pose the highest risk to Californians. This requires two separate steps. During the first step, risk assessment, the ARB identifies the highest risk substances called toxic air contaminants. In the second step, risk management, the ARB and local air pollution control districts investigate and adopt measures requiring air toxics sources to minimize risk to public health.

There are approximately 200 substances on the TAC list. More than 30 of these are found in diesel exhaust. On August 27, 1998, the TAC list was expanded to include particulate emissions from diesel engine exhaust, culminating a near-decade long scientific investigation into the health effects of exposure to the fine particles and other pollutants in diesel exhaust. Similar to the findings of the MATES II study, the ARB identification of diesel exhaust particulate matter (as a surrogate for all diesel exhaust emissions) as a TAC, provides another driving force for the AQMD to pursue the development of a refuse truck fleet rule as a strategy to mitigate public exposure to this pollutant.

Refuse Collection Vehicle Operations – General Description

Waste hauling companies are regulated by local city and county governments. Section 40059 of the Public Resources Code specifically delegates state authority in this

area to local government agencies. Local governments provide the public with refuse collection services utilizing their own vehicle fleet and/or they permit a private company to provide this service in their area of jurisdiction. The vast majority of refuse collection services in the District are provided by private companies. Based on the best available information, only 19 local agencies utilized their own fleet vehicles to provide this service. Specific waste collection services provided by public or private fleets that are affected by PR1193 include (1) municipal solid waste collection to landfills, (2) recyclable materials collection, and (3) green waste collection.

Private companies are allowed to provide refuse collection services through a contract or franchise with local jurisdiction, in return for rate regulation. Alternatively, the local jurisdiction may permit a number of waste haulers to compete for business within that jurisdiction. Typically, services for residential solid waste collection are permitted by exclusive contract or franchise, whereas commercial accounts are serviced by a number of permitted waste hauling companies that compete with each other.

In general, the transfer of solid waste can be either from the source directly to a landfill, or from the source to a transfer station (e.g., a materials recovery facility) and finally to the landfill. The transfer station is an intermediary location where curbside waste collection vehicles deposit their solid waste, and larger trucks, with much greater load capacity, transport solid waste from the transfer station to the landfill. Both transfer stations and landfills are either publicly or privately owned.

Because the waste hauling industry is regulated by local city and county governments, no single government listing

has been compiled of refuse companies offering services throughout the District. Nevertheless, based on industry input, staff currently estimates that there may be approximately 6000 refuse trucks affected by PR1193. In an effort to refine this number, staff has surveyed local governments to provide the District with a list of waste hauling companies permitted to operate in their jurisdiction. To date, staff has compiled a list of approximately 300 waste hauling companies operating in the District, which was expected based on input from the waste hauling industry. Staff has surveyed these companies directly to obtain a profile of their fleet population and related data, such as fuel consumption and average vehicle life, that could help estimate the emissions benefit of the rule. (See Attachment 2, Refuse Vehicle Usage Survey Form.)

There are two basic chassis/engine combinations used for refuse trucks. The first type, for waste hauler use for curbside refuse collection or roll-off (refuse trucks that carry large bins to and from commercial sites) are typically of a GVW between 50,000 and 60,000 lb., and are generally powered by heavy-duty engines in the range of about 280 to 330 horsepower. These types of refuse trucks, based on industry input, constitute about 95 percent of all waste hauling vehicles. The second basic type of waste hauling vehicle is called a transfer vehicle. These resemble the largest line-haul trucks, in that they are designed with a GVW of up to 80,000 lb. and are powered by heavy-duty engines of about 400 hp. These vehicles specialize in transferring solid waste from transfer facilities to the landfills.

Current Use of Natural Gas and Dual-Fuel Refuse Trucks

Characteristics of a Natural Gas Waste Hauler. Natural gas refuse trucks can be powered by engines operated on LNG or CNG, or by dual-fuel engines that use both diesel fuel and natural gas. The natural gas fuel tanks add approximately 500 to 1500 lb. of weight to a refuse truck, which affects its payload capacity. Natural gas refuse truck engines are typically rated at 250 to 400 hp.

Although the cost of natural gas is generally less than that for diesels, natural gas usage is up to 20% greater when compared to diesel usage. However, one engine manufacturer claims equivalent fuel usage for their diesel and natural gas engines. In addition, elimination of alternative emission control devices on diesel heavy-duty engines may narrow the fuel economy gap as well, per the 1998 settlement agreement between ARB, U.S. EPA and the seven HDE manufacturers.

Attachment 3 lists information on the availability of natural gas engines and engine/chassis combinations that could be used in waste hauling vehicles. Attachment 4 lists the corresponding emissions related information for these engines. Engine manufactures producing dedicated natural gas engines for waste hauling applications include Cummins Engine Company, Deere Power Systems, Detroit Diesel Corporation, and Mack Truck Corporation. Certified conversion systems for Caterpillar electronic diesel engines are available from Caterpillar dealers. These conversion systems convert the diesel engine into a compression ignition natural gas engine (commonly known as a "dual-fuel" or "bi-fuel" engine. Chassis manufacturers currently offering or planning to offer refuse trucks utilizing these

engines are Crane Carrier, Freightliner Trucks, Mack Truck Corporation, Peterbilt, Western Star, and Alternative Fuel Technology (AFT). A number of these refuse trucks and engines are currently operating in the District. These include natural gas waste hauling operations in Orange, Riverside, and LA counties. Waste Management of the Desert in Palm Desert and Waste Management of Orange County use spark ignited natural gas engines in their refuse trucks, while Taormina in Anaheim uses compression ignited natural gas/diesel dual-fuel refuse and transfer trucks.

Based on industry input and staff observations, the operation of spark ignited natural gas powered refuse trucks has been successfully demonstrated from an overall operational standpoint. This has been specifically reported by Waste Management to District staff, based on their experience natural gas powered refuse trucks in the District and in other areas of the country. Within the District, Waste Management operates 30 natural gas powered refuse trucks in Coachella Valley (Waste Management of the Desert) and in Orange County. Natural gas powered refuse trucks have been successfully demonstrated to the point where Waste Management plans to convert their entire fleets, operating in the Coachella Valley to using natural gas.

The advantage of compression ignition natural gas over spark ignition natural gas are: a lower weight penalty from fuel tanks due to the superior fuel efficiency, less space required for fuel tanks due to the superior fuel efficiency, longer range due to the better fuel efficiency, lower capital cost due to fewer fuel tanks and lower capital cost due to the use of a standard base engine rather than a custom built spark ignition engine.

GENERAL DESCRIPTION AND EXPLANATION OF RULE REQUIREMENTS

Purpose of the Rule

The purpose of PR 1193 is to reduce criteria pollutants (NOx) and toxic (PM) emissions from municipal solid waste collection operations in the District. This is accomplished by requiring purchasers of fleet refuse trucks, when adding or replacing heavy-duty refuse trucks to their fleets, to purchase cleaner-burning, lower-emitting, alternative-fuel or dual-fuel heavy-duty refuse trucks, as commercially available. Alternative fuel is defined as compressed or liquefied natural gas, liquefied petroleum gas, methanol, electricity, fuel cells, or other advanced technology that does not rely on diesel fuel. Dual-fuel vehicles are equipped with a diesel engine that uses an alternative fuel in combination with the diesel fuel to enable compression ignition.

Applicability

The proposed rule applies to public agencies and private companies that operate solid waste collection vehicles and their fleets consist of 15 or more solid waste collection (vehicles that operate on fixed routes and collects solid waste at residential or commercial establishments), transfer, or rolloff vehicles. PR1193 maximizes the air quality benefit for this fleet segment by taking advantage of the significant benefits of natural gas engine technology in terms of its inherently low NOx and PM emissions. In an effort to facilitate the transition from diesel to dedicated natural gas operation, PR1193 allows compression ignited dual-fuel technology for a limited time (prior to July 1, 2002) for purchases of solid waste collection

vehicles. However, dual-fuel vehicle purchases or leases is provided for transfer or rolloff vehicles with no time limitations. The time restriction is placed on the solid waste collection vehicles so that AQMD staff can futher [sic] evaluate the emission benefits of the dual-fuel technology in the solid waste collection duty cycle. Unlike the other vehicles where dual-fuel is allowed with no time limitations, these vehicles may use natural gas for a smaller part of their duty cycle and may not be as low emitting as in other duty cycles. As part of this evaluation, AQMD staff intends to evaluate all engine technologies as they are applied in the refuse collection operations.

For the purposes of PR1193, a heavy-duty truck is a vehicle having a GVW of at least 14,000 pounds. A refuse truck is one that is used for the express purpose of collecting and/or transporting solid waste, except hazardous waste, as defined in Section 40191(a) of the Public Resources code.

Vehicle Purchase Requirements

The proposed rule would require that beginning July 1, 2001, public and affected private operators of fleets consisting of 50 or more solid waste collection vehicles and beginning July 1, 2002, for public and private operators with 15 or more solid waste collection vehicles or a combined total of 15 or more rolloff, transfer, or solid waste collection vehicles, when adding or replacing a heavy-duty refuse truck to their fleets, to purchase or lease an alternative-fuel heavy-duty refuse truck, as commercially available. In addition, the rule requirements would provide, the option of purchasing or leasing any solid waste collection vehicle having a dual-fuel engine that has been

ARB-certified to meet an optional NOx standard and a particulate emissions level equivalent to an alternative-fuel engine. Beginning July 1, 2001, for public or private operators with a combined total of 15 or more transfer or rolloff vehicles, all new purchases of transfer or rolloff vehicles must be equipped with an alternative-fueled or a dual-fuel engine. Vehicles that are contracted for purchase prior to the rule-effectiveness date are not required to comply with PR1193 purchase requirements. However, options to purchase vehicles exercised after the adoption of Rule 1193 would be subject to the rule requirements.

Permitted alternative fuels include compressed or liquefied natural gas, propane, methanol, electricity, fuels cells or other advanced technologies that do not rely on diesel fuel, consistent with allowable alternative fuels in ARB transit bus regulation. For the purposes of this rule, a dual-fuel engine is one that uses a combination of natural gas and diesel fuel, as described in the above sections.

Exemptions

In response to comment from entities potentially affected by the proposed rule, PR1193 exempts certain types vehicles purchased from the utilization of alternative fuels. These include evaluation/test vehicles, vehicles not used for the express purpose of collecting and transporting solid waste from residential or commercial establishments to transfer stations or landfills, and alternative fuel model unavailability. These exemptions allow for promising experimental technologies to be demonstrated, clarify the intent of the rule, and address concerns regarding the possibility that a satisfactory alternative-fuel refuse truck may not be available for a specific niche application.

In addition, under emergency situation such as a natural disaster, conventionally-fueled refuse collection vehicles may be brought into the District as allowed under the AQMD Rule 118 if the Governor or President declares a state of emergency.

Comments were made that for smaller operators there may still be a need to provide some relief from the rule requirements if the infrastructure or funding for alternative fuel vehicles are not available. PR 1193 now provides language that the operator may make a case before the AQMD Hearing Board as provided in AQMD Regulation V to seek relief from the rule requirements, in some cases. Persons in violation of this rule are subject to all penalties and enforcement proceedings specified in the Health and Safety Code until such time as they obtain a variance from the District Hearing Board.

Compliance Auditing and Enforcement

PR1193 will require that affected public agencies keep sufficient vehicle data records to document rule compliance, and that these records be maintained for a minimum of two years. The AQMD intends to audit these records, either at the vehicle fleet location or by requesting appropriate documents to be submitted to the AQMD for review. The specific data to be kept for each new vehicle will include the DMV Certificate of Title and registration, vehicle manufacturer, model-year, model, engine family number, fuel type, and fuel usage. In addition, to the preceding, affected fleets utilizing the exemption provision of the proposed rule must supply documentation proving the exemption of each exempt vehicle purchase to AQMD

upon request. If a public agency is found to be in non-compliance with rule requirements, then the public agency will be subject to penalties specified in Health and Safety Code Division 26, Part 4, Chapter 4, Article 3. The AQMD also plans to develop an enforcement guideline document that will stress the implementation of corrective actions by public fleets rather than punitive monetary penalties during the initial years of rule implementation, for first time violators.

EMISSION BENEFITS

Criteria Pollutants

The goal of the proposed fleet rule is to reduce PM and NOx emissions through the introduction and use of cleaner-burning vehicles. These emission benefits are expected to primarily consist of reduced toxic exposure to diesel particulate matter and reduced emissions of nitrogen oxides. With regard to the criteria pollutants, PR1193 is specifically based on achieving emission reductions beyond the mandatory U.S. EPA and ARB heavy-duty engine emission standards. The emission benefits for PR1193 are based on refuse truck fleets purchasing alternative-fueled refuse trucks instead of diesel refuse trucks.

Emission reduction estimates were originally developed for the entire suite of fleet rules using an approach based on vehicle-miles-traveled (VMT) data from the latest ARB-approved emissions inventory model, EMFAC7G. Based on this approach and on general assumptions that apply to all heavy-duty vehicles in all of the proposed fleet rules, estimates for the year 2010 would be 11 to 16 tons per year of PM and 75 tons per year of NOx.

However, one of the largest waste hauler fleet operators noted that, for a typical refuse truck operation, much of the fuel consumption (and, thereby, emissions) occurs in activities that produce substantially more emissions compared to an average heavy-duty vehicle – that is, in the loading of curbside trash into the refuse truck, in frequent or prolonged engine idle, and in frequent low-speed stop-and-go driving conditions. Therefore, the emission reduction estimates presented below have been based on total fuel consumption, covering both travel and collection activities. Emission reductions were specifically determined using input provided by the waste hauling industry, and the Carl Moyer Program methodology for quantifying emission reductions for natural gas heavy-duty vehicle projects, including waste hauling projects. In addition, based on input from ARB staff, this methodology should provide an improved estimate of emission reductions from clean fuel fleet operations. The following formula and assumptions are utilized [sic] the emission reductions for PR1193.

Annual ER = (Number of vehicles) *
(Annual Fuel consumption, gal)*
(18.5 bhp-hr/gal) * (Mandatory std –
Optional std) / Useful life

Assumptions:

1. Incorporate adopted ARB & U.S. EPA emission standards, to ensure surplus emission reductions only.
2. Rule implementation starts July 1, 2001.
3. Rule affects 6000 refuse trucks (based on industry input).

4. Diesel fuel consumption equals 10,000 gallons per vehicle per year (based on industry input).
5. Useful life equals 12 years (industry input is 10 to 15 years).
6. The following NOx emission rates are used for diesel powered refuse trucks:

Timeframe	Rate	Explanation
2001 – 9/2002	4.0 g/bhp-hr	Mandatory ARB/U.S. EPA Emission Std.
10/2002 – 2010	2.0 g/bhp-hr	Nominal NOx emission level assumed by ARB as the NOx portion of the mandatory 2.5 g/bhp-hr NMHC+NOx emission standard, based on ARB staff input.

7. The following NOx emission rates are used for alternative-fuel powered refuse trucks:

Timeframe	Rate	Explanation
2001 – 9/2002	2.5 g/bhp-hr	Based on ARB staff input and certification standards for natural gas heavy-duty engines.
10/2002 – 2010	1.4 g/bhp-hr	Based on discussions and concurrence with ARB technical staff regarding the appropriate nominal NOx emission level that corresponds with the expected certification level of 1.8 g/bhp-hr NMHC+NOx for alternative-fuel heavy-duty engines in this time frame.

8. PM standard for diesel HDEs is based on 0.1 g/bhp-hr emission standard.

9. For alternative fuels (e.g., natural gas), an average PM level of 0.03 g/bhp-hr is assumed, based on ARB input and certification data for HDEs. Also, this emission level is consistent with the PM standard for the alternative-fuel path in the recently adopted ARB Urban Bus Fleet Rule.

Based on the methodology and assumptions above, Table 3 details the emission reductions on a yearly basis for the years 2001 through 2010.

Table 3

Proposed Rule 1193 Emission Reduction Estimates

(Tons per year)

	Oxides of Nitrogen		Particulate Matter	
Year	Current	Cumulative	Current	Cumulative
7/2001 – 2002	76	76	4	4
2002 – 2003	130	206	7	11
2003 – 2004	61	267	7	18
2004 – 2005	61	329	7	25
2005 – 2006	61	390	7	32
2006 – 2007	61	451	7	39
2007 – 2008	61	512	7	46
2008 – 2009	61	573	7	53
2009 – 2010	61	634	7	61
2010 – 2011	61	695	7	68

Air Toxics

Estimated Relative Toxicity of Diesel and Natural Gas Powered Refuse Trucks.

The relative air toxic risks of diesel and corresponding natural gas refuse trucks were estimated using an approach based on determining weighted toxic risk factors for the two fuels under consideration. The weighted toxic risk factor is determined by multiplying the individual toxic constituents of the exhaust by their respective cancer potency factor, and then proportionately adjusting these values by an estimated annual mass emission rate of particulate matter (PM) and non-methane hydrocarbon emissions (NMHC). The purpose of this analysis is to use these weighted toxicity factors to estimate the number of natural gas refuse trucks roughly equivalent to one diesel refuse trucks [sic] based on toxic risk.

For the purposes of this analysis, the toxic component analyzed for diesel refuse trucks is limited to total PM emissions. This is because ARB staff has indicated that the toxic risk factor for diesel PM already incorporates toxic risks from all other constituents in diesel exhaust. For natural gas refuse trucks, the relative toxic risk was estimated based on the PM contribution of nickel and hexavalent chromium emissions, and the NMHC emissions of formaldehyde, acetaldehyde, benzene, and 1,3 butadiene. ARB speciation profiles were used to develop nickel and hexavalent fraction of the natural gas PM exhaust. With regard to NMHC components, a paper from West Virginia University (SAE paper 972971) was used to develop the benzene and 1,3 butadiene NMHC fractions, and an ARB speciation profile from an industrial natural gas-powered internal combustion engine was used to develop the formaldehyde and acetaldehyde NMHC

fractions. (The West Virginia University paper provided speciation data generated from a CNG-powered engine used in on-road vehicle applications, but did not specifically include formaldehyde and acetaldehyde data.)

For the purposes of this specific analysis, the annual PM emission rates for diesel and natural gas refuse trucks were developed using the same assumptions contained in the criteria pollutant benefit methodology. These assumptions include diesel refuse truck emissions of 0.1 g/bhp-hr for 2000 and subsequent years, and natural gas refuse truck emissions of 0.03 g/bhp-hr for 2000 and beyond. The annual mass emission rate of NMHC emissions for natural gas engines is highly variable based on input received by engine manufacturers, as evidenced by ARB certification data for natural gas engine families approved for sale in California. For the purposes of this analysis, a range of NMHC emissions was estimated using this certification data. Using this range, which corresponds to 0.3 g/bhp-hr to 0.8 g/bhp-hr, for the 2000-to-9/2002 time period and 0.3 to 0.5 g/bhp-hr for the 10/2002-and-later time period, assumed conversion factor of 18.5 bhp-hr/gal for refuse trucks, and an assumed fuel consumption for refuse trucks of 10,000 gal/yr, annual NMHC emissions were determined.

Table 4 shows the annual PM and NMHC mass emission rates, relative toxicity factors for PM and NMHC exhaust components, and the overall weighted toxicity factor. Based on these overall weighted toxicity factors, Table 5 shows the number of CNG refuse trucks that is roughly equivalent to one corresponding diesel-powered refuse trucks [sic]. The number is equal to the overall weighted toxicity factor for the diesel refuse trucks divided by the corresponding value for the natural gas refuse trucks.

Different time frames are utilized in this analysis to account for more stringent emission standards for NOx, and NMHC that are implemented in the overall time frame being analyzed.

Based on this analysis, it can be concluded that significant toxic emission benefits will occur on a per vehicle basis from the use on a natural gas refuse truck versus a diesel refuse truck. Depending on the time frame, one diesel refuse truck is estimated to have the same toxicity as up to 74 corresponding natural gas refuse trucks, as shown in Table 5. Depending on the availability of particulate traps that are still under development by control device and engine manufacturers, this ratio may be expected to decrease.

Table 4

ESTIMATED RELATIVE TOXIC RISK

POLLUTANT	COMPOUND	2000 THRU 9/2002		10/2000 & LATER	
		DIESEL	CNG	DIESEL	CNG
PM (lb/yr)		40.7	12.2	40.7	12.2
NMHC (lb/yr)		---	122-326	---	122-204
Resultant Emission-weighted Toxicity Risk Factors					
	DIESEL PM[1]	122.2	---	122.2	---
	METALS[2]	---	0.41	---	0.41
	NMHC[3]	---	1.24-3.31	--	1.24-2.08
	OVERALL WEIGHTED TOXIC RISK	122.2	1.65-3.72	122.2	1.65-2.49

1. Based on ARB input, the unit risk factor associated with diesel PM includes toxic risk contributions for all other compounds in exhaust.
2. Toxic risk for PM exhaust in CNG vehicles based on nickel and hexavalent chromium (Cr^{+6}).
3. Toxic compounds in NMHC exhaust emissions for CNG vehicles included in this analysis are formaldehyde, acetaldehyde, benzene, and 1,3 butadiene.

Table 5

ESTIMATED VEHICLE TOXIC RISK RATIO[1]

TIME PERIOD	RISK RATIO	
	MINIMUM	MAXIMUM
2000 thru 9/2002	33	74
10/2002 and later	49	74

1. Number of CNG vehicles equal to one equivalent diesel vehicle based on toxic risk.

COST ANALYSIS

Fleet Cost Impacts

Increased capital and operational cost associated with compliance with the proposed rule is expected. However, individual cost impacts will vary depending on the individual public agency or private fleet. Cost impacts may be incurred through increased purchase, maintenance, building upgrade, and refueling infrastructure costs. These impacts may be partially offset by lower fuel costs.

The capital cost of a spark ignition natural gas vehicle is more expensive than a comparable diesel model by a differential of approximately $40,000 per truck whilc [sic]

compression ignition gas versions of similar trucks have demonstrated a price differential of $25,000 to $30,000. This is primarily a result of the current low-volume production of natural gas vehicles. It is possible with larger production volumes and economies of scale, the capital cost is projected to decrease, based on an industry estimate, to about $25,000 per vehicle for a spark ignition natural gas vehicle in the near term.

The maintenance costs of current CNG engines used in waste hauling operations are generally higher, but manageable, according to waste hauling industry representatives. It is expected that these maintenance costs will decrease as natural gas engine technology matures, according to natural gas heavy-duty engine industry input. As is common with new technologies, the maintenance costs for the first generation of natural gas vehicles are generally higher than for diesels. With increasing experience and training, maintenance issues have been resolved. At the same time, fleets have changed their preventative maintenance schedules to take advantage of the benefits of natural gas – especially the greatly increased oil life and reduced engine wear. For example, John Deere advertises "diesel-like fuel economy, longer service intervals, easier servicing, less downtime, and longer engine life" with regard to natural gas powered heavy-duty engines. The result has been a steady reduction in NGV maintenance costs. There have been numerous examples of fleets, in transit operations, that have experienced natural gas vehicle maintenance cost impacts that have been very comparable to their diesel counterparts. Staff believes that fleets operating natural gas powered refuse trucks as well will experience these positive results.

For example, Pierce Transit ~~in~~ Washington, with a fleet including many first and second generation CNG engines, has experienced total maintenance and oil costs of 16.4 cents per mile on its CNG buses, compared to 16.2 cents per mile for its diesel buses. The Antelope Valley School district experienced average maintenance costs of 13 cents per mile on 16 CNG school buses equipped with Deere engines, compared to 21 cents per mile for diesel buses purchased about the same time, and 24 cents per mile for its existing diesel buses. For a fleet of 136 1993-1996 CNG buses, Sacramento Regional Transit District found its maintenance costs to be 18.1 cents per mile in 1997, compared to 27.7 cents per mile for its fleet of 73 1985-1990 diesel buses. Sunline Transit Agency in the Palm Springs area reported average maintenance costs of 18.4 cents per mile for 34 1993-model CNG buses. Sunline has estimated that their overall costs have decreased by 27 percent through the use [sic] compressed natural gas (CNG) urban buses compared to diesel-powered buses.

The socioeconomic report prepared by the AQMD staff provides additional information relative to the costs and potential economic impacts of PR1193. Using the cost impacts ascribed to PR1193 and the emission benefits as detailed above based on best-available information, the cost-effectiveness ranges between $8,000 per ton of emission reduction for the "best-case funding scenario" and $40,000 per ton of emission reduction for the worst-case funding scenario. The "most likely funding scenario" is $25,000 per ton of emission reduction.

Incremental Cost-Effectiveness Analysis

Health and Safety Code Section 40920.6 requires an assessment of incremental cost effectiveness for proposed regulations relative to ozone, CO, SOx, NOx, and their precursors. Incremental cost effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential control options that can achieve the same emission reduction goal of a regulation. Compared to Proposed Rule 1193, incremental cost effectiveness of including non-waste hauling vehicles into the vehicle count as a result of including fleets where the total number of vehicles is 15 or more, but do not have 15 vehicles used in waste hauling activities, for determining the proposed rule's applicability is $28,900 per ton of combined pollutants (NOx and PM) assuming no funding. Approximately 1,200 waste hauling vehicles and five natural gas refueling stations would be added as a result of the analysis.

Funding Programs

Various federal, state and local funding programs are available to assist public waste hauling agencies (and, in some programs, their private partners) in the acquisition and operation [sic] alternative-fuel heavy-duty refuse trucks. These are generally described below. In addition, a more detailed discussion of these funding sources is included in the socioeconomic report that is currently being prepared by AQMD staff.

State Energy Program. States will promote the conservation of energy, reduce the rate of growth of energy demand, and reduce dependence on imported oil through the development and implementation of a comprehensive

State Energy Program. The State Energy Program is the result of the consolidation of two formula grant programs – the State Energy Conservation Program and the Institutional Conservation Program. The State Energy Program includes provisions for competitively awarded financial assistance for a number of state-oriented special project activities, including alternative fuels. In addition to funding for special project activities, states may choose to allocate base formula funds to programs to accelerate the use of alternative fuels for government vehicles.

For more information, contact your State Energy Office or the DOE Regional Office for your region, listed under the Points of Contact section for your state, or contact Ron Santoro at DOE Headquarters at (202) 586-8296.

The Carl Moyer Program was established by ARB to provide incentives to encourage and expedite implementation of the cleanest commercially available vehicles, and specifically to reduce emissions from heavy-duty engines. The incentives are grants for offsetting the higher costs of primarily alternative-fuel heavy-duty vehicles, and for supporting the fueling infrastructure. The ARB has established overall program requirements and allocates funds to local air districts, including AQMD, for local program administration. To date, both dedicated natural gas and dual-fuel refuse trucks have been approved for funding by the Governing Board.

The AQMD contact is Cindy Sullivan (AQMD) at 909-396-3249.

Mobile Source Air Pollution Reduction Review Committee's (MSRC) Discretionary Funds. This annual work program, that typically includes an HDV incentive program, pays

the incremental cost for the purchase of new OEM alternative-fuel engines and vehicles.

Thirty percent of the funds collected each year from a $4 surcharge on vehicle registration created by **AB 2766** (Sher) goes to the Mobile Source Air Pollution Reduction Review Committee **(MSRC)** to be used to implement programs to reduce mobile source emissions. Managers of the program have apportioned the available funding into several technology-specific categories, including alternative-fuel heavy-duty refuse trucks. To date, both dedicated natural gas and dual-fuel refuse trucks have been approved for MSRC Program funding by the Governing Board.

The AQMD contact is Ray Gorski (MSRC Technical Advisor) at 909-396-2479.

Local Government Subvention Funds. Forty percent of the AB 2766 funds collected go to local governments based on a pro-rated share of population and must be used to reduce mobile source emissions. Cities can use their funds to purchase alternative-fuel vehicles or engines. While these funds are used primarily by municipalities for their own projects, these monies can be allocated by the city for public-private partnerships to pursue AFV and EV projects. Funds not expended carry over from year to year.

The AQMD staff contacts are Larry Rhinehart (AQMD) at 909-396-2898 and Oscar Abarca (AQMD) at 909-396-3242.

Current and recent users and applicants of the above co-funding programs include the following. Waste Management, Inc., currently operates 30 natural gas refuse trucks in the District, and plans an additional 200 CNG and LNG trucks during the next two years, along with six new

natural gas fueling stations. The Carl Moyer Program will provide partial funding for 50 refuse trucks, 9 new and 41 re-powers. Burrtec Waste Industries, Inc., operates 175 refuse trucks in Riverside, Fontana, Victorville, Irwindale, and Yucaipa. Burrtec replaced 13 diesel trucks in last year's Carl Moyer Program and is planning to replace 42 more this year. The new trucks are powered by dual-fuel (LNG/diesel) engines. Other applicants to the Carl Moyer Program this year are BFI (Sunshine Canyon) for 10 dual-fuel trucks, CalMet Services (Montebello-Downey-Cerritos) for 30 repowered CNG trucks, USA Biomass Corporation for 13 repowers to dual-fuel trucks, Spartan Cleanup Corporation for 8 repowers to dual-fuel trucks, and Palm Spring Disposal Services for the purchase of 6 new CNG refuse trucks.

RESOLUTION NO. 00-19

A Resolution of the South Coast Air Quality Management District (AQMD) Governing Board certifying the Final Program Environmental Assessment and adopting the Statement of Findings and Statement of Overriding Considerations, Mitigation Monitoring Plan for the Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses.

A Resolution of the Governing Board adopting Rule 1192 – Clean On-Road Transit Buses.

WHEREAS, the Governing Board has determined that the Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses, are a "project" pursuant to the terms of the California Environmental Quality Act (CEQA); and

WHEREAS, the AQMD has had its regulatory program certified pursuant to Public Resources Code §21080.5 and has conducted CEQA review pursuant to such Program (AQMD Rule 110); and

WHEREAS, AQMD staff has prepared a Draft Program Environmental Assessment (PEA) pursuant to its certified regulatory Program and state CEQA Guidelines §15252 setting forth the potential environmental consequences of the Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses; and

WHEREAS, the Draft PEA was released for a 45-day public review and comment period from March 10, 2000 to April 25, 2000. During the 45-day public review and comment period, the AQMD received a total of eight comment letters; and

WHEREAS, the Final PEA for the Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit buses includes responses to all comments received on the Draft PEA; and

WHEREAS, it is necessary that the adequacy of the Final PEA for the Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses, be considered by the Governing Board prior to its adoption; and

WHEREAS, significant environmental impacts were identified from implementing the Proposed Fleet Vehicle Rules that cannot be mitigated to a level of insignificance; and

WHEREAS, the AQMD Governing Board voting on this Resolution has reviewed, and considered the Final PEA for the Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses; and

WHEREAS, it is necessary that the AQMD prepare a Statement of Findings, Statement of Overriding Considerations and Mitigation Monitoring Plan pursuant to state CEQA Guidelines §15091, 15093, and 15097, respectively, regarding adverse environmental impacts for the implementation of all the Proposed Fleet Vehicle Rules that cannot be mitigated to insignificance;

WHEREAS, the Governing Board has determined that the socioeconomic impact assessment and staff report of the Proposed Fleet Vehicle Rules, including Proposed Rule 1192, is consistent with the Governing Board March 17, 1989 and October 14, 1994 resolutions and the provisions of Health and Safety code Sections 40440.8, 40728.5 and 40920.6; and

WHEREAS, the Governing Board has reviewed and considered the staff's findings related to cost and employment impacts of Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses, as set forth in the socioeconomic impact assessment, and hereby finds and determines that cost and employment impacts are as set forth in that assessment; and

WHEREAS, the Governing Board has determined that Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses, are not short-term control measures in the amended 1997 Air Quality Management Plan (AQMP) in 1999 and thus, were not ranked by cost-effectiveness relative to other AQMP control measures in the amended 1997 AQMP and further that cost-effectiveness in terms of dollars per ton of pollutant reduced is not applicable to rules regulating toxic air contaminants. This, however, does not imply that cost considerations are not applicable in development of toxic rules; and

WHEREAS, the Governing Board has determined that staff has actively considered the socioeconomic impact analysis and made a good faith effort to minimize any socioeconomic impacts; and

WHEREAS, the Governing Board obtains its authority to adopt, amend, or repel rules and regulations from Sections 39002, 39650 et. seq., 40000, 40001, 40440, 40441, 40463, 40702, 40725 through 40728, 40910 through 40920.5, 41508, 41700, 41706, 42300, and 44390 through 44394 of the California Health and Safety Code; and

WHEREAS, the Governing Board is given specific authority relative to public and commercial fleet vehicles

under Sections 40919(a)(4) and 40447.5(a) of the California Health and Safety Code; and

WHEREAS, the Governing Board has determined that a need exists to adopt Proposed Rule 1192 – Clean On-Road Transit Buses to reduce public health exposure to criteria pollutant and toxic air contaminants, to meet state and federal ambient air quality standards, to meet the intent of the Board's Environmental Justice Initiatives, and to clarify the intent and implementation of Rule 1192 requirements; and

WHEREAS, the Governing Board has determined that Proposed Rule 1192 – Clean On-Road Transit Buses, as proposed is written or displayed so that its meaning can be easily understood by the persons directly affected by the proposed rule; and

WHEREAS, the Governing Board has determined that Proposed Rule 1192 – Clean On-Road Transit Buses, as proposed is in harmony with, and not in conflict with or contradictory to, existing federal or state statutes, court decisions, or regulations; and

WHEREAS, the Governing Board has determined that Proposed Rule 1192 – Clean On-Road Transit Buses, as proposed does not impose the same requirements as any existing state or federal regulation and the proposed rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the District; and

WHEREAS, the Governing Board has determined that Proposed Rule – Clean On-Road Transit Buses, as proposed, references the following statutes which the AQMD hereby implements, interprets or makes specific: H&S Code Sections 40001 (rules to achieve ambient air

quality standards), 40440(a) (rules to carry out AQMP), and 40447.5(a) (rules to require fleets of 15 or more vehicles operating substantially in the AQMD to purchase vehicles powered by methanol or other equivalently clean burning alternative fuel when adding or replacing vehicles), 40919(a)(4) (requires significant numbers of low-emission vehicles in fleets); and

WHEREAS, the Governing Board has found that there is a problem that Propose [sic] Rule 1192 will help alleviate, namely continued exceedances of state and federal ambient air quality standards, and that this rule will promote the attainment of these standards; and

WHEREAS, the Governing Board finds and determines that the requirements of this rule are, in the aggregate, at least as protective of public health and welfare as applicable Federal standards; and

WHEREAS, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40725; and

WHEREAS, the Governing Board has held a public hearing in accordance with all provisions of law; and

WHEREAS, the Governing Board finds and determines, taking into consideration the factors in Section (d)(4)(D) of the Governing Board Procedures, that the modifications adopted which have been made to the proposed rule since notice of public hearing was published do not significantly change the meaning of the proposed rule within the meaning of Health and Safety Code Section 40726 and are not significant pursuant to CEQA Guidelines Section 15088.5; and

WHEREAS, the AQMD specifies the Deputy Executive Officer of Rule 1192 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of this proposed rule is based, which are located at the South Coast Air Quality Management District, 21865 E. Copley Drive, Diamond Bar, California; and

WHEREAS, a need exists to have staff resources identified to assist affected parties in implementing on-road fleet vehicle rules; and

WHEREAS, the California Air Resources Board (CARB) Transit Bus Regulations do not consider hybrid diesel electric technologies that use diesel fuel for use under the transit bus rule alternative-fuel path; and

WHEREAS, CARB has committed to study and evaluate the role of hybrid diesel electric technologies that use diesel fuel and make recommendations to its Board on the role of these technologies.

WHEREAS, some diesel engine manufacturers hope to make future improvements in conventionally-fueled engines via emissions control technologies and low sulfur diesel fuel to achieve significantly lower nitrogen oxides, particulate matter, and toxic emission levels similar to existing alternative fuel engines; and

WHEREAS, the Governing Board has determined there is a need for staff to provide monitoring and implementation updates on progress and issues related to Rule 1192 to the Governing Board.

NOW, THEREFORE, BE IT RESOLVED that the Governing Board does hereby approve the written responses to the comments to the Draft PEA for the Proposed Fleet

Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses, adopt Attachment 1 including the contained Statement of Overriding Considerations, and Mitigation Monitoring Plan and certify the Final PEA for the Proposed Fleet Vehicle Rules, including Proposed Rule 1192 – Clean On-Road Transit Buses, which was completed in compliance with CEQA and Rule 110 provisions; and find that the Final PEA was presented to the Governing Board, whose members reviewed, considered, and approved the information therein prior to acting on Proposed Rule 1192 – Clean On-Road Transit Buses; and

BE IT FURTHER RESOLVED that the Governing Board hereby adopts the Statement of Findings and Statement of Overriding Considerations pursuant to state CEQA Guidelines §§15091 and 15093, respectively, regarding adverse environmental impacts that cannot be mitigated to insignificance; and adopts the Mitigation Monitoring Plan pursuant to Public Resources Code §21081.6; which are included in Attachment 1, attached and incorporated herein by reference.

BE IT FURTHER RESOLVED, that the Governing Board does hereby approve the written response to CEQA comments.

BE IT FURTHER RESOLVED, that the Governing Board does hereby approve the Economic Assessment Report.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to identify in the FY 2000-2001 Fiscal Year Budget a staff position for a "Fleet Rule Implementation Officer" who will assist affected parties in implementing the fleet vehicle rules. The Fleet Rule

Implementation Officer will initially report directly to the Executive Officer.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to work with CARB staff in evaluating the hybrid-electric and dual-fuel technologies that use diesel fuel and provide annual reports to the Governing Board on the emission reduction potential and make recommendations for potential inclusion in Rule 1192.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to continue to work with transit operators to secure funding needed to implement Rule 1192 and to place a high priority on Rule 1192 implementation relative to the Carl Moyer program.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to notify the Governing Board of any changes in state or federal law that may expand or clarify the authority of the AQMD to pursue a fuel neutral fleet rule policy and other policy changes as adopted, and to recommend revisions to the rule to be consistent with state or federal statutory requirements.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to work with shareholders to evaluate the possibility of expanding the compliance flexibility provisions of the rule to allow programs such as an exchange mechanism between various vehicle types (light, medium and heavy duty), and between fleets within the region. Within six months, staff shall report to the Governing Board with its findings and recommendations.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct the AQMD Technology Advancement Office to hold an annual symposium to review the research, development, and demonstration of advanced diesel technology, electric vehicles, hybrid vehicles, fuel cell powered vehicles, and other advanced vehicles and to include a summary of the findings in an annual report to the Governing Board.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to return to the Governing Board with proposed amendments to Rule 1192 to allow an exemption for the purchase of a conventionally fueled vehicle where the engine and control device have been approved by CARB to meet certification emission levels which achieve at least a 54 percent reduction in nitrogen oxide and a 71 percent reduction in particulate matter exhaust emissions from the currently available conventionally fueled engine (family) certification emission levels approved by CARB (as of the date of adoption of this rule); and which achieves a reduction in toxic risk equivalent to the level which would be achieved, on average, by currently available alternative fueled engines certified by CARB. Equivalent toxic risk shall be calculated based upon unit risk factors as approved by the California Office of Environmental Health Hazard Assessment (OEHHA). Procedures for calculating the toxic risk reduction shall be developed in consultation with CARB and OEHHA, within 90 days of the date of adoption of this rule and presented to the Governing Board as an informational item. Staff shall propose such rule amendments within 90 days of receipt of sufficient technical information establishing that the above criteria have been satisfied.

The Governing Board also directs staff to periodically review the above guidance relative to technology advancement and to report back to the Governing Board at such time as changes may be appropriate.

BE IT FURTHER RESOLVED, that the Governing Board does hereby request CARB to consider the feasibility of further enhancing its heavy-duty engine and urban bus certification procedures to better reflect in-use emissions over representative duty cycles.

BE IT FURTHER RESOLVED, that when CARB updates its heavy-duty engine and urban bus certification procedures, that the AQMD will utilize such procedures relative to Rule 1192.

BE IT FURTHER RESOLVED, based on the findings in the annual progress report described above, staff may recommend modifications to the rule requirements for the Governing Board's consideration.

BE IT FURTHER RESOLVED, that the Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Rule 1192 – Clean On-Road Transit Buses, as set forth in the attached and incorporated herein by reference.

Attachments

AYES: Antonovich, Bernson, Burke, Carney, Coad, Glover, LaPisto-Kirtley, Loveridge, Mikels, Paulitz, Verdugo-Peralta and Wilson

NOES: None

DATE: 6-16-00 /s/ Jackie Dix
Jackie Dix, Clerk of the Board

RESOLUTION NO. 00-29

A Resolution of the South Coast Air Quality Management District (AQMD) Governing Board approving the finding that the potential adverse environmental impacts from adopting Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, are within the scope of the previously prepared and certified Program Environmental Assessment for the Proposed Fleet Vehicle Rules and Related Rule Amendments, and that no new environmental document is required.

A Resolution of the Governing Board adopting Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles.

WHEREAS, the Governing Board has determined with certainty that Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles is a "project" pursuant to the terms of the California Environmental Quality Act (CEQA); and

WHEREAS, the AQMD has had its regulatory program certified pursuant to Public Resources Code § 21080.5 and has conducted CEQA review pursuant to such Program (AQMD Rule 110); and

WHEREAS, AQMD staff has prepared a Draft Program Environmental Assessment (PEA) pursuant to its certified regulatory Program and state CEQA Guidelines §§ 15168 and 15252 setting forth the potential environmental consequences of the Proposed Fleet Vehicle Rules and Related Rule Amendments, including Proposed Rule

1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles; and

WHEREAS, the Draft PEA was released for a 45-day public review and comment period from March 10, 2000 to April 25, 2000. During the 45-day public review and comment period, the AQMD received a total of eight comment letters; and

WHEREAS, the Final PEA for the Proposed Fleet Vehicle Rules and Related Rule Amendments, including Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, includes responses to all comments received on the Draft PEA and was certified by the Governing Board on June 16, 2000; and

WHEREAS, consistent with CEQA Guidelines § 15168(c)(2) the AQMD is relying on the Final PEA prepared for the Proposed Fleet Vehicle Rules and Related Rule Amendments to serve as the CEQA document for Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, because the proposed project would not cause any new environmental impacts to occur or require new mitigation measures that have not already been addressed in the previously prepared and certified Final PEA; and

WHEREAS, significant environmental impacts were identified from implementing the Proposed Fleet Vehicle Rules and Related Rule Amendments that cannot be mitigated to a level of insignificance; and

WHEREAS, the Governing Board voting on this Resolution has reviewed, and considered the previously prepared and certified Final PEA for the Proposed Fleet

Vehicle Rules, including Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles; and

WHEREAS, it is necessary that the AQMD prepare a Statement of Findings, Statement of Overriding Considerations and Mitigation Monitoring Plan (see Attachment 1) pursuant to state CEQA Guidelines § 15091, 15093, and 15097, respectively, regarding adverse environmental impacts from implementing of all the Proposed Fleet Vehicle Rules and Related Rule Amendments that cannot be mitigated to insignificance; and

WHEREAS, the Governing Board has determined that the socioeconomic impact assessment and staff report of the Proposed Fleet Vehicle Rules, including Proposed Rule 1196, is consistent with the Governing Board March 17, 1989 and October 14, 1994 resolutions and the provisions of Health and Safety Code Sections 40440.8, 40728.5 and 40920.6; and

WHEREAS, the Governing Board has reviewed and considered the staff's findings related to cost and employment impacts of Proposed Fleet Vehicle Rules, including Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, as set forth in the socioeconomic impact assessment, and hereby finds and determines that cost and employment impacts are as set forth in that assessment; and

WHEREAS, the Governing Board has determined that Proposed Fleet Vehicle Rules, including Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, are not short-term control measures in the amended 1997 Air Quality Management Plan (AQMP) in 1999 and thus, were not ranked by cost-effectiveness relative to other AQMP control measures in the amended

1997 AQMP and further that cost-effectiveness in terms of dollars per ton of pollutant reduced is not applicable to rules regulating toxic air contaminants. This, however, does not imply that cost considerations are not applicable in development of toxic rules; and

WHEREAS, the Governing Board has actively considered the socioeconomic impact analysis and made a good faith effort to minimize any socioeconomic impacts; and

WHEREAS, the Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Sections 39002, 39650 et. seq., 40000, 40001, 40440, 40441, 40463, 40702, 40725 through 40728, 41508, 41700, 41706, 42300, and 44390 through 44394 of the California Health and Safety Code; and

WHEREAS, the Governing Board is given specific authority relative to public and commercial fleet vehicles under Sections 40919(a)(4) and 40447.5(a) of the California Health and Safety Code; and

WHEREAS, the Governing Board has determined that a need exists to adopt Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles to reduce public health exposure to criteria pollutant and toxic air contaminants, to meet state and federal ambient air quality standards, to meet the intent of the Board's Environmental Justice Initiatives, and to clarify the intent and implementation of Rule 1196 requirements; and

WHEREAS, the Governing Board has determined that Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, as proposed, is written or displayed

so that its meaning can be easily understood by the persons directly affected by the proposed rule; and

WHEREAS, the Governing Board has determined that Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, as proposed, is in harmony with, and not in conflict with or contradictory to, existing federal or state statutes, court decisions, or regulations; and

WHEREAS, the Governing Board has determined that Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, as proposed, does not impose the same requirements as any existing state or federal regulation, and the proposed rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the District; and

WHEREAS, the Governing Board has determined that Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, as proposed, references the following statutes which the AQMD hereby implements, interprets or makes specific: H&S Code Sections 40001 (rules to achieve ambient air quality standards), 40440(a) (rules to carry out AQMP), and 40447.5(a) (rules to require fleets of 15 or more vehicles operating substantially in the AQMD to purchase vehicles powered by methanol or other equivalently clean burning alternative fuel when adding or replacing vehicles), and 40919(a)(4) (requires a significant number of low-emission vehicles in fleets); and

WHEREAS, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40725; and

WHEREAS, the Governing Board has held a public hearing in accordance with all provisions of law; and

WHEREAS, the Governing Board finds and determines, taking into consideration the factors in Section (d)(4)(D) of the Governing Board Procedures, that the modifications adopted which have been made to the proposed rule since notice of public hearing was published do not significantly change the meaning of the proposed rule within the meaning of Health and Safety Code Section 40726 and would not constitute significant new information pursuant to CEQA; and

WHEREAS, the AQMD specifies the Deputy Executive Officer of Planning, Rule Development and Area Sources as the custodian of the Rule 1196 documents or other materials which constitute the record of proceedings upon which the adoption of this proposed rule is based, which are located at the South Coast Air Quality Management District, 21865 E. Copley Drive, Diamond Bar, California; and

WHEREAS, the Governing Board has found that there is a problem that Propose [sic] Rule 1196 will help alleviate, namely continued exceedances of state and federal ambient air quality standards, and that this rule will promote the attainment of these standards; and

WHEREAS, the Governing Board finds and determines that the requirements of this rule are, in the aggregate, at least as protective of public health and welfare as applicable federal standards; and

WHEREAS, concerns have been raised regarding the availability of sufficient supply of alternative fuel during emergency situations; and

WHEREAS, the Governing Board has determined there is a need for staff to provide monitoring and implementation

updates on progress and issues related to Rule 1196 to the Governing Board.

WHEREAS, a need exists to have staff resources identified to assist affected parties in implementing on-road fleet vehicle rules and the Governing Board has directed staff to create a "Fleet Rule Implementation Officer" position in the AQMD FY 2000-01 Fiscal Year Budget at its June 16, 2000 meeting; and

NOW THEREFORE, BE IT RESOLVED, that the Governing Board hereby approves the finding, pursuant to the authority granted by law, that the potential adverse environmental effects from adopting Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, are within the scope of the previously prepared and certified Final Program Environmental Assessment for the Proposed Fleet Vehicle Rules (certified June 16, 2000) and that no new environmental documents are required pursuant to CEQA Guidelines § 15168(c)(5).

BE IT FURTHER RESOLVED, that the Final Program Environmental Assessment for the Proposed Fleet Vehicle Rules was presented to this Board on June 16, 2000, which is the decisionmaking body of the lead agency, and that this Board reviewed and considered the information contained in this document prior to approving this project.

BE IT FURTHER RESOLVED, that the Governing Board hereby adopts the Statement of Findings and Statement of Overriding Considerations pursuant to state CEQA Guidelines §§ 15091 and 15093, respectively, regarding adverse environmental impacts that cannot be mitigated to insignificance; and adopts the Mitigation Monitoring Plan pursuant to CEQA Guidelines § 15097;

which are included in Attachment 1 – Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan, attached and incorporated herein by reference.

BE IT FURTHER RESOLVED, that the Governing Board does hereby approve the socioeconomic impact assessment for Rule 1196 – Clean On-Road Heavy-Duty Public Fleet vehicles.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to notify the Governing Board of any changes in state or federal law that may expand or clarify the authority of the AQMD to pursue a fuel neutral fleet rule policy and other policy changes as adopted, and to recommend revisions to the rule to be consistent with state or federal statutory requirements.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to return to the Governing Board with proposed amendments to Rule 1196 to allow an exemption for the purchase of a conventionally fueled heavy-duty vehicle where the engine and control device have been approved by CARB to meet certification emission levels which achieve at least a 54 percent reduction in nitrogen oxide and a 71 percent reduction in particulate matter exhaust emissions from the currently available conventionally fueled engine (family) certification emission levels approved by CARB (as of the date of adoption of this rule); and which achieves a reduction in toxic risk equivalent to the level which would be achieved, on average, by currently available alternative fueled engines certified by CARB. Equivalent toxic risk shall be calculated based upon unit risk factors as approved by the California Office of Environmental Health Hazard Assessment (OEHHA).

Procedures for calculating the toxic risk reduction shall be based in accordance to direction to staff in the Adopting Resolution Nos. 00-19 and 00-20 for Rules 1192 and 1193 (adopted June 16, 2000), respectively. Staff shall propose such rule amendments within 90 days of receipt of sufficient technical information establishing that the above criteria have been satisfied.

The Governing Board also directs staff to periodically review the above guidance relative to technology advancement including advancements in the development of other technologies such as grid-based electric hybrid vehicles and to report back to the Governing Board at such time as changes may be appropriate.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to develop the "Technical Infeasibility Certification" application form for Rule 1196 no later than six months from the date of adoption of Rule 1196. As part of the development of the application form, staff shall consider approaches to streamline the process such as a "pre-bid" process or posting previously approved technical infeasibility certifications. In addition, staff shall evaluate appropriate fees that would be assessed for processing a Technical Infeasibility Certification application and make recommendations to amend Regulation III along with the AQMD Fiscal Year 2001-02 Budget, scheduled for May 2001.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to monitor the financial incentive programs needed to offset the additional purchase costs of a Rule 1196 compliant heavy-duty vehicle. Staff shall provide a report on a quarterly basis to the Governing Board Mobile Source Committee on the status

of the funding programs, the use of funds from the programs towards compliance with Rule 1196, and potential shortfalls in funding levels, if any. In addition, staff may make recommendations to amend Rule 1196 as necessary to reflect the findings of the quarterly reports.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to monitor the development of the alternative-fuel refueling infrastructure to determine if the future infrastructure network would be adequate to provide fuel for rule compliant vehicles and during emergency situations. One year prior to Rule 1196 implementation and every six months thereafter, staff shall provide reports to the Governing Board Mobile Source Committee on the status of the alternative-fuel refueling infrastructure development. In addition, staff may make recommendations to amend Rule 1196 as necessary to reflect the findings of the reports.

BE IT FURTHER RESOLVED, based on the findings in the progress reports described above, staff may recommend modifications to the rule requirements for the Governing Board's consideration.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to provide a status report on Rule 1196 and other fleet rules, back to the Governing Board within six month with an examination of implementation issues, legal actions, legislation, related actions by CARB and U.S. EPA, and possible expansion of the rule to other fleets. This paragraph is not intended to restrict in any way the Governing Board's authority to adopt or amend fleet vehicle regulations or represent a moratorium on AQMD fleet vehicle rulemaking.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to convene a Working Group with the California Trucking Association, California Independent Oil Marketers Association, and other interested parties concerning inter-regional competitiveness issues pertaining to private sector petroleum/fuel delivery trucks and to report back to the Governing Board on the results of such discussions prior to initiating any amendments to Rule 1196 or creation of a new rule that would include such vehicles.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to provide to the Governing Board at its next meeting, a schedule for either amendment proposals to Rule 1196 or new rule proposals that would expand Rule 1196 implementation to private utilities and fuel providers. The schedule may be provided as part of the Rule Forecast Report to the Governing Board.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to monitor those local jurisdictions that provide public services such as street maintenance or landscape services to determine if implementation of Rule 1196 would cause local jurisdictions to reduce or eliminate such services since Rule 1196 does not apply to private entities that compete for local jurisdiction services. Staff shall conduct a survey and complete it no later than six month prior to Rule 1196 implementation, of historical local jurisdiction public service contracting activities and potential future public service contracting levels as part of this effort. Staff shall report its findings and any recommendations to the Governing Board Mobile Source Committee.

BE IT FURTHER RESOLVED, that the Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Rule 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles, as set forth in the attached and incorporated herein by reference.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to convene a public meeting to discuss the assumptions used in the risk-weighted emission calculations for heavy-duty gasoline engines within 120 days and to report to the Governing Board Mobile Source Committee on issues and comments regarding the calculations and may make recommendations on any potential amendments to Rule 1196 relative to allowance of gasoline-powered vehicles. In addition, staff shall consider as part of the calculations any new hydrocarbon speciation profiles for alternative-fueled engines that may become available within the 120 day period.

BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to work with the City of Los Angeles and other parties affected by Rule 1196 to identify and secure additional funding sources. In addition, staff shall work with CARB to investigate the authority to collect regional fees, such as the automobile registration surcharge fee, that could be used to help offset the costs of compliance with Rule 1196 and other fleet vehicle rules. A report shall be prepared on whether such authority exists and, if so, how it could be exercised for this purpose.

Attachment

AYES: Antonovich, Bernson, Burke, Carney, Coad, Glover, LaPisto-Kirtley, Loveridge, Mikels, Paulitz, Verdugo-Peralta and Wilson

NOES: None

ABSENT: None

DATE: October 20, 2000

/s/ Jackie Dix
Clerk of the District Board

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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENGINE MANUFACTURERS ASSOCIATION, Plaintiff, v. SOUTHCOAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al., Defendants.	Case No. 00-09065 FMC (BQRX) PLAINTIFF ENGINE MANUFACTURERS ASSOCIATION'S STATEMENT OF UNCONTROVERTED FACTS AND CONCLUSIONS OF LAW; [PROPOSED JUDGMENT] Date: May 21, 2001 Time: 10:00 a.m. Courtroom: 750 Honorable Florence-Marie Cooper United States District Judge
NATURAL RESOURCES DEFENSE COUNCIL, INC., COALITION FOR CLEAN AIR, INC., COMMUNITIES FOR A BETTER ENVIRONMENT, INC.,	

PLANNING AND CONSERVATION LEAGUE, and SIERRA CLUB, Intervenors.	
WESTERN STATES PETROLEUM ASSOCIATION, Intervenor.	

Plaintiff ENGINE MANUFACTURERS ASSOCIATION ("EMA"), by and through its attorneys, and pursuant to Local Rule 7.14.1, hereby submits this Statement of Uncontroverted Facts and Conclusions of Law in support of EMA's Motion for Summary Judgment.

Uncontroverted Material Facts

EMA contends that there is no genuine issue with respect to any of the following material facts:

A. Background Facts

1. This case centers on six regulations (Rules 1191-1194, 1186.1 and 1196) relating to the control of emissions from certain fleets of motor vehicles operating within the South Coast Air Basin. These regulations are generally referred to as the "SCAQMD Fleet Rules." The South Coast Air Quality Management District ("SCAQMD"), acting through its Board members and executive officer (collectively, the "SCAQMD Defendants") adopted the SCAQMD Fleet Rules pursuant to Board hearings held on June 16, 2000, August 18, 2000, and October 20, 2000. (Complaint and Answer, ¶¶ 1, 47.)

2. Defendant SCAQMD is the air quality management district established under the California Health and Safety Code to develop and implement a strategy for achieving and maintaining ambient air quality standards within the South Coast Air Basin. Agents of the SCAQMD, including the SCAQMD Defendants, are responsible for administering the Fleet Rules at issue. (Complaint and Answer, ¶ 14.)

3. EMA is the not-for-profit trade association that represents the leading manufacturers of internal combustion engines used in truck and bus applications. One of EMA's principal purposes is to represent the interests of its member companies in regulatory proceedings, and, where necessary, to challenge rulemaking activities that are in violation of the underlying statutes. Since the SCAQMD Fleet Rules will prohibit or limit the purchase (and, therefore, sale) of EMA's members' diesel-fueled engine products, EMA's members are subject to and will be adversely affected by the SCAQMD Fleet Rules. (Declaration of Jed Mandel; Ex. 1 to EMA's Supporting Memorandum.)

4. EMA has initiated this action for a declaratory judgment that the SCAQMD Fleet Rules are preempted and void under the federal Clean Air Act ("CAA"), and for injunctive relief against any efforts to enforce the SCAQMD Fleet Rules.

5. The U.S. Environmental Protection Agency ("EPA") and the State of California, acting through its Air Resources Board ("ARB"), have the authority to regulate mobile sources of air pollution (*i.e.* motor vehicles and motor vehicle engines), and are doing so in a comprehensive manner through a series of emission control regulations.

Other states and political subdivisions, however, are preempted under Section 209(a) of the CAA from "adopting or attempting to enforce *any standard relating to* the *control of emissions*" from new motor vehicles or motor vehicle engines. 42 U.S.C. § 7543(a) (Emphasis added.) Section 177 of the CAA sets forth additional express preemption provisions. *See* 42 U.S.C. § 7507.

6. More specifically, Section 209(a) of the CAA provides, as follows:

(a) *Prohibition*

> No state or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part. No State [or political subdivision thereof] shall require certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as condition precedent to the initial retail sale, titling (if any), or registration of such motor vehicle, motor vehicle engine, or equipment. 42 U.S.C. §7543(a).

7. Section 177 of the CAA provides in relevant part, as follows:

> Nothing in this section or in subchapter II of this chapter shall be construed as authorizing any such State to prohibit or limit, directly or indirectly, the manufacture or sale of a new motor vehicle or motor vehicle engine that is certified in California as meeting California standards, or to take any action of any kind to create, or have the effect of creating, a motor vehicle or motor vehicle engine different than a motor vehicle or engine

certified in California under California standards (a "third vehicle") or otherwise create such a "third vehicle." 42 U.S.C. §7507.

8. When Congress enacts legislation, it may lawfully prohibit parallel state legislation and occupy or preempt a particular field. (Complaint and Answer, ¶¶ 83, 90, 97, 104, 111, 118.)

9. One of Congress' express purposes in enacting Sections 209(a) and 177 of the CAA was to protect manufacturers of motor vehicles and motor vehicle engines from a myriad of potentially inconsistent and burdensome state and local emission-control standards for new motor vehicles and new motor vehicle engines. (Complaint and Answer, ¶ 6.)

10. Over the past several years, EPA, and the CARB have adopted similar emission control requirements for new heavy-duty on-highway diesel-fueled motor vehicles and engines. These include current NOx and PM standards of 4.0 g/bhp-hr and 0.1 g/bhp-hr (0.05 g/bhp-hr for urban buses), respectively, and, starting in 2004, a NOx + NMHC standard of 2.4 g/bhp-hr and a PM standard of 0.10 g/bhp-hr (0.05 g/bhp-hr for urban buses). (Complaint and Answer, ¶¶ 34-35.)

11. The ARB also has enacted separate, more stringent emission control programs for motor vehicles, including one for light and medium-duty vehicles, including certain diesel-fueled vehicles (the "LEV Program"), and one for heavy-duty urban transit buses (the "Urban Bus Program"). (Complaint and Answer, ¶ 38.)

12. The LEV Program requires manufacturers to produce and deliver for sale vehicles or engines certified to

various emission-based categories. The LEV Program achieves emission reductions by requiring manufacturers to sell progressively cleaner mixes of vehicles over time. (Complaint and Answer, ¶ 39.)

13. In the medium-duty vehicle category, which includes certain diesel-fueled pickup trucks, vans and large SUVs, the LEV Program achieves emissions reductions by requiring all vehicles to be certified to more stringent emission categories in specified model years (*i.e.* LEV standards in 2002, and ULEV standards in 2004). Medium-duty vehicle manufacturers also have the flexibility to balance the sale of higher emitting vehicles (*e.g.* vehicles certified to Tier 1 levels) with vehicles certified to more stringent emission requirements (*e.g.* vehicles certified to ULEV levels). (Complaint and Answer, ¶ 41.)

14. With respect to new medium-duty diesel-fueled motor vehicle engines, the LEV Program, in essence, allows for the sale of those engine products through the 2002-2004 timeframe when the LEV and ULEV requirements take effect. Consequently, new diesel-fueled medium-duty motor vehicle engines can be sold and purchased under the ARB's LEV Program for at least the next several years. (Complaint and Answer, ¶ 42.) (SR1191-17.)

15. On February 24, 2000, the ARB adopted its Urban Bus Program. To implement this ARB regulation, urban transit bus fleet operators are required to choose between two different compliance paths – a "diesel path" or an "alternative-fuel path." Fleet operators were required to make this choice and notify ARB of their decision by January 31, 2001. (Complaint and Answer, ¶ 43.)

16. The ARB Urban Bus Program specifically permits the purchase and sale of diesel-fueled transit buses, both currently and into the future. (Complaint and Answer, ¶ 45.)

17. With respect to all other new heavy-duty on-highway diesel-fueled motor vehicles and engines (other than new urban transit buses), the governing emission control requirements, both nationally and in California, are those as described in paragraph 34 of EMA's Amended Complaint (and in paragraph 10 above). Consequently, and as long as any medium-duty or heavy-duty on-highway diesel-fueled motor vehicle engine meets those specified emission requirements, it can be purchased and sold in California, both currently and into the future. (Complaint and Answer, ¶ 46.)

18. The SCAQMD Defendants have relied on California Health and Safety Code section 40447.5 in crafting and adopting the SCAQMD Fleet Rules. Health and Safety Code section 40447.5 was enacted in 1987, three years prior to the 1990 amendments to the CAA that added the specific "third vehicle" prohibitions to CAA Section 177. (Complaint and Answer, ¶ 71.)

B. Rule 1191

19. Rule 1191, entitled "Clean On-Road Light-and Medium-Duty Public Fleet Vehicles," was adopted on June 16, 2000. A copy of Rule 1191 is appended hereto as Exhibit "A."

20. The stated purpose of Rule 1191 (as set forth in paragraph (a) of the Rule) is to require passenger car, light-duty truck, or medium-duty vehicle fleet operators to

acquire low-emitting gasoline and alternative-fuel vehicles *to reduce air toxic and criteria pollutant emissions* when procuring or leasing these vehicles in the District." (Rule 1191(a); emphasis added.)

21. Paragraph (c)(1) of Rule 1191 defines "alternative-fueled vehicle" to mean "*a vehicle or engine that is not powered* by gasoline or *diesel fuel* and emits hydrocarbon, carbon monoxide, or nitrogen oxides, on an individual basis at least equivalent to or lower than a ULEV based on ARB's certification data." (1191(c)(1); emphasis added.)

22. Paragraph (d) of Rule 1191 provides that "[u]pon adoption of this rule and every six months thereafter, the Executive Officer shall publish a list of engines and associated vehicle models certified by California Air Resources Board (CARB) that fleet operators can choose from to comply with paragraph (e) of this Rule." (Rule 1191(d).)

23. Paragraph (e)(1) of Rule 1191 provides that "[b]eginning July 1, 2001, public fleet operators of 15 or more vehicles shall procure from the list published by the Executive Officer as required under paragraph (d), or otherwise certified by CARB as equivalent low-emitting gasoline or alternative-fuel vehicles, when adding or replacing vehicles to their vehicle fleet." (Rule 1191(e)(1).)

24. A copy of the final SCAQMD Staff Report for Rule 1191 is appended hereto as Exhibit "B." The Staff Report explains the purpose of Rule 1191, as follows:

> This proposed rule is being developed in an effort to reduce public exposure to motor vehicle pollution, including both toxic and ozone precursor emissions. It is intended that these benefits be surplus to existing state and federal relations

governing emission levels from on-road motor vehicles. (SR 1191-1.)

* * *

One of the objectives of the proposed rule is to require the purchase of the cleanest vehicles for fleets, taking advantage of the varying levels of emission control relative to the wide array of vehicles being produced for compliance with the [ARB's] LEV regulation. (SR 1191-4.)

* * *

The primary air quality objective of Proposed Rule 1191 is to reduce air emissions and toxic risk levels within the SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT . . . [*Diesel-fueled vehicles would not be considered "low-emission vehicles."* (SR 1191-6; emphasis added.)

25. The Staff Report for Rule 1191 confirms that the purchase and sale of certain ARB-certified vehicles and engines will be prohibited or limited under the Rule. Specifically, the Staff Report states,

Over time, the ARB low-emission vehicle [LEV] regulation will require the mix of vehicles sold by manufacturers to become cleaner as a result of compliance with fleet average hydrocarbon standards. By requiring the acquisition of ARB-certified low-emission vehicles or cleaner when public fleets add or replace vehicles, *the purchase of* higher polluting [ARB-certified] *Tier 1 and transitional-low-emission vehicles* [TLEVs] *will be prevented.*

* * *

For certain types of specialty medium-duty vehicles (engine-certified [and diesel-fueled]),

ARB's LEV regulation may not require manufacturers to sell sufficient amounts of vehicles or models prior to [July 1, 2001] to satisfy fleet operational needs and still comply with PR 1191 purchase requirements.

* * *

[T]here still may be a model availability issue since fleet operators are indicating that there are potentially many specialty diesel-powered medium-duty vehicles where the availability of corresponding gasoline or alternative fuel vehicles is uncertain. (Note that *PR 1191 only allows compliant gasoline or alternative-fueled vehicles to be purchased.*) (SR 1191-7, 8; emphasis added.)

* * *

The ARB LEV regulations allow manufacturers to produce [and sell] vehicles that emit at higher levels than low-emission vehicles, including vehicles certified to Tier I and transitional-low-emission vehicle standards, through the year 2002. To the extent that *the proposed rule limits the purchase of these vehicles*, there will be an emission benefit from the LEV or cleaner purchase requirement. (SR 1191-17; emphasis added.)

* * *

Diesel powered vehicles are not allowed, unless the vehicle purchase qualifies for an exemption. (SR 1191-9; emphasis added.)

26. Attachment 4 to the Rule 1191 Staff Report is entitled, "ARB-Certified Engines/Vehicles Not Qualifying Under Proposed Rule 1191(e)." Among the ARB-certified (but non-qualifying) vehicles and engines included on

Attachment 4 are numerous medium-duty diesel-fueled vehicles.

27. The purpose of Rule 1191 is to effect a general quantitative reduction in emissions from fleets of light and medium duty vehicles and engines operating in the District.

28. Rule 1191 establishes emissions-related requirements as conditions precedent to the initial purchase and sale of certain new motor vehicles or motor vehicle engines.

29. Rule 1191 prohibits or limits, directly or indirectly, the purchase and sale of certain new motor vehicles or motor vehicle engines (*i.e.* Tier 1 and TLEV vehicles and engines) that are certified in California as meeting California standards.

C. Rule 1192

30. Rule 1192, entitled "Clean On-Road Transit Buses," was adopted on June 16, 2000. A copy of Rule 1192 is appended hereto as Exhibit "C."

31. The stated purpose of Rule 1192 (as set forth in paragraph (a) of the Rule) is to "require public transit fleet operators to acquire alternative-fuel heavy-duty vehicles when procuring or leasing these vehicles *to reduce air toxic and criteria pollutant emissions.*" (Rule 1192(a); emphasis added.)

32. Paragraph (c)(1) of Rule 1192 defines "alternative-fuel heavy-duty vehicle" to mean "a heavy-duty vehicle, urban bus or engine that uses compressed or liquefied natural gas, propane, methanol, electricity, fuel

cells, or other advanced *technologies* that do *not rely on diesel fuel* . . . " (Rule 1192(c)(1); emphasis added.)

33. Paragraph (d) of Rule 1192 provides that "[u]pon adoption of this rule [or in certain cases, beginning July 1, 2001], . . . all new transit vehicle or urban bus purchases or leases must be alternative-fuel heavy-duty vehicles when adding or replacing buses to their fleets." (Rule 1192(d).)

34. A copy of the final SCAQMD Staff Report for Rule 1192 is appended hereto as Exhibit "D." The Staff Report explains the purpose of Rule 1192, as follows:

> This proposed rule is being developed in an effort to reduce public exposure to transit bus emissions. It is intended that these benefits be surplus to existing state and federal regulations governing emission levels from on-road motor vehicles. (SR 1192-1.)
>
> * * *
>
> Proposed Rule 1192 is one of a series of rules being proposed that affect vehicle fleet operations in the District. The AQMD's objective is to promote the use of less-polluting vehicles to reduce criteria pollutant and toxic emissions. (SR 1192-2.)
>
> * * *
>
> The goal of the proposed fleet rule is to help ensure that emission reductions are achieved from transit bus operations. (SR 1192-11.)

35. The Staff Report for Rule 1192 confirms that the purchase and sale of ARB-certified "diesel path" transit

buses will be prohibited or limited under the Rule. Specifically, the Staff Report states,

> The vehicle purchase provisions require affected fleets to purchase buses powered by alternative fuels. . . . The definition of an alternative-fuel heavy-duty vehicle is . . . advanced *technologies that do not rely on diesel fuel*. (SR 1192-7, 8; emphasis added.)
>
> * * *
>
> The effect of PR 1192, therefore, will be to basically require affected fleet operators to choose the alternative fuel path. (SR 1192-11.)
>
> * * *
>
> Proposed Rule 1192 requires public agency fleets and private fleets under contract to government agencies to purchase transit vehicles powered by alternative fuels. . . . Although *diesel transit bus purchases would be prohibited*, vehicles powered by natural gas, for example, have been commercially available and used in fleets located in the AQMD since the early 1990s. (SR 1192-20; emphasis added.)

36. The purpose of Rule 1192 is to effect a general quantitative reduction in emissions from heavy-duty urban transit buses operating in the District.

37. Rule 1192 establishes emissions-related requirements as conditions precedent to the initial purchase and sale of certain new motor vehicles or motor vehicle engines.

38. Rule 1192 prohibits or limits, directly or indirectly, the purchase and sale of certain new motor vehicles and motor vehicle engines (*i.e.* "diesel path" urban transit

buses) that are certified in California as meeting California standards.

D. Rule 1193

39. Rule 1193, entitled "Clean On-Road Residential and Commercial Refuse Collection Vehicles," was adopted on June 16, 2000. A copy of Rule 1193 is appended hereto as Exhibit "E."

40. The stated purpose of Rule 1193 (as set forth in paragraph (a) of the Rule) is to "require public and private solid waste collection fleet operators to acquire alternative-fuel refuse collection heavy-duty vehicles when procuring or leasing these vehicles *to reduce air toxic and criteria pollutant emissions*." (Rule 1193(a); emphasis added.)

41. Paragraph (c)(1) of Rule 1193 defines "alternative-fuel heavy-duty vehicle" to mean "a heavy-duty vehicle or engine that uses compressed or liquefied natural gas, liquefied petroleum gas, methanol, electricity, fuel cells, or other advanced *technologies that do not rely on diesel fuel*." (Rule 1193(c)(1); emphasis added.)

42. Paragraph (d)(1) of Rule 1193 provides that, with certain limited exceptions, "[b]eginning July, 2001 [or July 1, 2002 for smaller fleets], . . . all additions to an existing fleet, or formation of a new fleet, of solid waste collection vehicles shall be by purchase or lease of: (A) alternative-fuel heavy-duty vehicles when adding or replacing solid waste collection vehicles to their vehicle fleets . . . " Similar requirements are imposed with respect to fleets of "transfer or rolloff vehicles." (Rule 1193(d).)

43. A copy of the final SCAQMD Staff Report for Rule 1193 is appended hereto as Exhibit "F." The Staff Report explains the purpose of Rule 1193, as follows:

> This proposed rule is being developed in an effort to reduce public exposure to air pollution emitted from refuse collection vehicles, including toxic particulates, and ozone precursor emissions. (SR 1193-1.)
>
> * * *
>
> Refuse collection vehicles are covered in this proposed rule as part of an overall effort by the AQMD to reduce toxic, particulate, and ozone precursor emissions from public and private fleets operation [sic] in the AQMD. (SR 1193-1.)
>
> * * *
>
> The purpose of PR 1193 is to reduce criteria pollutants (NOx) and toxic (PM) emissions from municipal solid waste collection operations in the District. (SR 1193-6.)
>
> * * *
>
> The goal of the proposed fleet rule is to reduce PM and NOx emissions through the introduction and use of cleaner-burning vehicles. (SR 1193-8.)

44. The Staff Report for Rule 1193 confirms that the purchase and sale of certain ARB-certified diesel-fueled vehicles and engines will be prohibited or limited under the Rule. Specifically, the Staff Report states,

> In an effort to facilitate the *transition from diesel to dedicated natural gas operation*, PR 1193 allows compression ignited dual-fuel technology for a limited time (prior to July 1, 2002)

> for purchases of solid waste collection vehicles. (SR 1193-6; emphasis added.)
>
> * * *
>
> Permitted alternative fuels include compressed or liquefied natural gas, propane, methanol, electricity, fuel cells or other advanced *technologies that do not rely on diesel fuel*. (SR 1193-7; emphasis added.)
>
> * * *
>
> The emission benefits for PR 1193 are based on refuse truck fleets purchasing alternative-fueled refuse trucks *instead of diesel refuse trucks*. (SR 1193-8.)
>
> * * *
>
> The purpose of PR 1193 is to produce air quality benefits utilizing current alternative fuel heavy-duty engine technology for refuse truck applications. *This may require certain engine manufacturers to further develop their engine technologies* to the extent that refuse truck fleets affected by the proposed rule will be able to utilize their technology subsequent to rule implementation. (SR 1193-27; emphasis added.)

45. The purpose of Rule 1193 is to effect a general quantitative reduction in emissions from heavy-duty waste collection vehicles operating in the District.

46. Rule 1193 establishes emissions-related requirements as conditions precedent to the initial purchase and sale of certain new motor vehicles or motor vehicle engines.

47. Rule 1193 prohibits or limits, directly or indirectly, the purchase and sale of certain new motor vehicles

and motor vehicle engines (*i.e.* heavy-duty diesel-fueled waste collection vehicles) that are certified in California as meeting California standards.

E. Rule 1194

48. Rule 1194, entitled "Commercial Airport Ground Access," was adopted on August 18, 2000, and amended on October 20, 2000. A copy of Rule 1194 is appended hereto as Exhibit "G."

49. The stated purpose of Rule 1194 (as set forth in paragraph (a) of the Rule) is to "require passenger car, light-duty truck, medium-duty transit vehicle, and heavy-duty transit vehicle fleet operators to acquire cleaner burning or alternative-fueled vehicles *to reduce air toxic and criteria pollutant emissions* when procuring or leasing these vehicles in the District unless otherwise exempt." (Rule 1194(a); emphasis added.)

50. Paragraph (c)(2) of Rule 1194 defines "alternative-fueled vehicle" to mean "a light-or medium-duty vehicle, or heavy-duty transit vehicle or engine *that is not powered* by gasoline or *diesel fuel*." (Rule 1194(c)(2); emphasis added.)

51. Paragraph (d) of Rule 1194 generally provides that, beginning either July 1, 2001 or July 1, 2002, for airport fleet operators providing limousine or transit shuttle services to the public in and out of commercial airports terminals: (1) all new purchases or leases of passenger cars or medium-duty vehicles may not include ARB-certified Tier 1, TLEV or LEV vehicles when adding or replacing a passenger car or medium-duty vehicle to their fleets; and (2) all new heavy-duty transit vehicle

purchases or leases shall be alternative-fueled vehicles (not diesel-fueled vehicles) when adding or replacing transit vehicles to their vehicle fleets (Rule 1194(d).)

52. A copy of the final SCAQMD Staff Report for Rule 1194 is appended hereto as Exhibit "H." The Staff Report explains the purpose of Rule 1194, as follows:

> Proposed Rule 1194 (PR 1194) specifies that passenger transportation services at commercial airport terminals begin purchasing cleaner burning vehicles beginning July 1, 2001 when adding or replacing vehicles in their fleets. *These emission reductions would be in excess of the current federal and state requirements.* ... PR 1194 compliant vehicles meet a lower certified mass emissions exhaust standards than would normally be required ... These benefits would be *surplus to existing state and federal regulations governing emission levels from on-road motor vehicles.* (SR 1194-1; emphasis added.)
>
> * * *
>
> PR 1194 will achieve *emission reductions* specifically associated with commercial airport operations. ... The primary air quality objective of PR 1194 is *to reduce air emissions* and toxic risk levels within the AQMD. (SR 1194-4; emphasis added.)

53. The Staff Report for Rule 1194 confirms that the purchase and sale of certain ARB-certified vehicles and engines will be prohibited or limited under the Rule. Specifically, the Staff Report states,

> PR 1194 requires the acquisition of vehicles that have been certified to ARBs ULEV or cleaner standard [not Tier 1, TLEVs or LEVs] for

light- and medium-duty vehicles, and alternative fueled [not diesel-fueled] heavy-duty vehicles if these vehicles are authorized to pick up passengers at commercial airports . . . New purchases of heavy-duty fleet vehicles that pick-up passengers at the airport and transport them to parking lots, hotels/motels and new transit vehicle purchases, leases and operations contracts, *shall be ARB certified alternative fuel vehicles*. In order to implement these fleet acquisition requirements, as part of Rule 1194 the AQMD will publish a list of light- and medium-duty vehicle/engine models that meet ULEV or cleaner standards. It is intended that fleet managers will simply choose vehicles form this list for rule compliance purposes . . . (SR 1194-18; emphasis added.)

* * *

The proposed fleet rule is specifically based on achieving emission reductions *beyond the ARB Low Emission Vehicle regulation*. Emission reductions of the proposed fleet rule will be the result of affected vehicle fleets purchasing a cleaner mix of vehicles than they would have otherwise purchased. (SR 1194-19; emphasis added.)

* * *

It is assumed that *all replaced heavy-duty vehicles* and light-duty taxicabs *will be alternative fuel powered*. . . . [T]he only large sized light-duty vehicles certified to the ULEV emission standard are alternative fueled vehicles. (SR 1194-30; emphasis added.)

54. The purpose of Rule 1194 is to effect a general quantitative reduction in emissions from fleets of light,

medium, and heavy-duty vehicles and engines operating in the District.

55. Rule 1194 establishes emissions-related requirements as conditions precedent to the initial purchase and sale of certain new motor vehicles or motor vehicle engines.

56. Rule 1194 prohibits or limits, directly or indirectly, the purchase and sale of certain new motor vehicles or motor vehicle engines (*i.e.* Tier 1, TLEV and diesel-fueled vehicles and engines) that are certified in California as meeting California standards.

F. Rule 1186.1

57. Rule 1186.1, entitled "Less Polluting Sweepers," was adopted on August 18, 2000. A copy of Rule 1186.1 is appended hereto as Exhibit "I."

58. The stated purpose of Rule 1186.1 (as set forth in paragraph (a) of the Rule) is to "require certain public and private sweeper fleet operators to acquire alternate-fuel or otherwise less-polluting sweepers when purchasing or leasing these vehicles for sweeping operations." (Rule 1186.1(a).)

59. Paragraph (c)(2) of Rule 1186.1 defines "alternative-fuel sweeper" to mean "a sweeper with engine(s) that use compressed or liquefied natural gas, liquefied petroleum gas (propane), methanol, electricity, or fuel cells. Hybrid-electric and dual-fuel *technologies that use diesel fuel are not considered alternative-fuel technologies* for the purposes of this rule." (Rule 1186.1(c)(2); emphasis added.)

60. Paragraph (d)(1) of Rule 1186.1 provides that beginning July 1, 2002, unless a fleet operator obtains a "Technical Infeasibility Certification" from the SCAQMD's Executive Officer, fleet operators shall purchase or lease alternative-fuel sweepers for each individual purchase or lease of any replacement or additional sweeper. (Rule 1186.1(d)(1).)

61. A copy of the final SCAQMD Staff Report for Rule 1186.1 is appended hereto as Exhibit "J." The Staff Report explains the purpose of Rule 1186.1, as follows:

> The objective of these rules is to reduce exhaust emissions from on-road vehicles and the public's exposure to air toxic contaminants and criteria pollutants. (SR 1186.1-1.)
>
> * * *
>
> One of the primary objectives of the proposed Clean Fleets program, including PR 1186.1, is to reduce mobile source emissions, particularly diesel particulates, by accelerating the implementation of currently available alternative-fuel vehicle technology. (SR 1186.1-3.)
>
> * * *
>
> The purpose of PR 1186.1 is to increase the number of alternative-fuel sweepers used by fleet operators providing sweeping services in the AQMD's jurisdiction to reduce air toxic and criteria pollutant emissions. (SR 1186.1-5.)

62. The Staff Report for Rule 1186.1 confirms that the purchase and sale of certain ARB-certified diesel-fuel vehicles and engines will be prohibited and limited under the Rule. Specifically, the Staff Report states,

> For the purposes of this rule, hybrid-electric and dual-fuel *sweepers that use diesel fuel are not considered* at this time to be powered by alternative fuels. . . . Because sweeper manufacturers must typically *remove the existing diesel engine and fuel system* that the chassis/engine manufacturers provide before they can install an alternative-fuel engine and fuel system, there is an increased incremental cost for fleet operators who purchase an alternative-fuel sweeper. (SR 1186.1-5; emphasis added.)
>
> * * *
>
> PR 1186.1 *requires that diesel street sweepers be replaced with alternative-fuel street sweepers* after July 1, 2001. (SR 1186.1-11; emphasis added.)

63. The purpose of Rule 1186.1 is to effect a general quantitative reduction in emissions from street sweeper vehicles and engines operating in the District.

64. Rule 1186.1 establishes emissions-related requirements as conditions precedent to the initial purchase and sale of certain new motor vehicles or motor vehicle engines.

65. Rule 1186.1 prohibits or limits, directly or indirectly, the purchase and sale of certain new motor vehicles and motor vehicle engines (*i.e.* diesel-fueled street sweepers) that are certified in California as meeting California standards.

G. Rule 1196

66. Rule 1196, entitled "Clean On-Road Heavy-Duty Public Fleet Vehicles," was adopted on October 20, 2000. A copy of Rule 1196 is appended hereto as Exhibit "K."

67. The stated purpose of Rule 1196 (as set forth in paragraph (a) of the Rule) is to "require public fleet operators to acquire alternative-fuel heavy-duty vehicles when procuring or leasing these vehicles *to reduce air toxic and criteria pollutant emissions*." (Rule 1196(a); emphasis added.)

68. Paragraph (c)(1) of Rule 1196 defines "alternative-fuel heavy-duty engine or vehicle" to mean "a heavy-duty vehicle or engine that uses compressed or liquefied natural gas, propane, methanol, electricity, fuel cells, or other advanced technologies *that do not rely on diesel fuel*, and has been certified by the California Air Resources Board (CARB)." (Rule 1196(c)(1); emphasis added.)

69. Paragraph (d) of Rule 1196 provides that beginning July 1, 2002, unless a fleet operator obtains a "Technical Infeasibility Certification" from the SCAQMD's Executive Officer, all new additions to an existing fleet, or formation of a new fleet, or heavy-duty vehicles, shall be by purchase or lease of: (1) alternative-fuel heavy-duty engines or vehicles; (2) dual-fuel heavy-duty vehicles; or (3) dedicated gasoline heavy-duty vehicles. (Rule 1196(d).)

70. A copy of the final SCAQMD Staff Report for Rule 1196 is appended hereto as Exhibit "L." The Staff Report explains the purpose of Rule 1196, as follows:

> One of the primary objectives of the proposed Clean Fleet program, which includes PR 1196, is to reduce TAC emissions, primarily diesel particulate, by accelerating the implementation of

> commercially available alternative-fuel engines. (SR 1196-3).
>
> * * *
>
> The purpose of PR 1196 is to increase the number of alternative-fuel or gasoline heavy-duty vehicles used by fleet operators providing public services in the AQMD's jurisdiction to reduce air toxic and criteria pollutant emissions. (SR 1196-6.)
>
> * * *
>
> With regard to criteria pollutants, PR 1196 is specifically based on achieving *emission reductions beyond the mandatory U.S. EPA and* ARB *heavy-duty engine emission standards.* (SR 1196-12; emphasis added.)

71. The Staff Report for Rule 1196 confirms that the purchase and sale of certain ARB-certified heavy-duty vehicles and engines will be prohibited or limited under the Rule. Specifically, the Staff Report states,

> Proposed Rule (PR) 1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles – . . . would require public fleet operators to purchase alternative-fuel, dual-fuel, or gasoline heavy-duty vehicles when replacing or adding vehicles to their fleets. . . . Under current PR 1196 provisions, a fleet operator may be able to purchase or lease a diesel-powered vehicle *if SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT approves a Technical Infeasibility Certification request* for that purchase. AQMD approval of a Technical Infeasibility Certification request can only be *based on a demonstration that no alternative-fuel heavy-duty vehicles are commercially*

available for those specific operations. (SR 1196-1; emphasis added.)

* * *

A fleet operator may purchase or lease a conventionally fueled heavy-duty vehicle with approved exhaust control devices, if the AQMD certifies that it is technically infeasible for a fleet operator to purchase or lease an alternative-fuel heavy-duty vehicle. (SR 1196-10.)

* * *

The emission benefits of PR 1196 are primarily based on public fleet operators purchasing heavy-duty alternative-fuel vehicles *instead of heavy-duty diesel vehicles*. (SR 1196-12; emphasis added.)

* * *

Diesel powered vehicles are not allowed, unless a Technical Infeasibility Certification Request is approved by the Executive Officer. (SR 1196-22; emphasis added.)

72. The purpose of Rule 1196 is to effect a general quantitative reduction in emissions from fleets of heavy-duty vehicles and engines operating in the District.

73. Rule 1196 establishes emissions-related requirements as conditions precedent to the initial purchase and sale of certain new motor vehicles or motor vehicle engines.

74. Rule 1196 prohibits or limits, directly or indirectly, the purchase and sale of certain new motor vehicles or motor vehicle engines (*i.e.* heavy-duty diesel-fuel vehicles

and engines) that are certified in California as meeting California standards.

H. Governing Board Resolutions

75. The SCAQMD Governing Board Resolutions adopting Rules 1192-1194, 1186.1 and 1196 are appended hereto as Group Exhibit "M."

76. Each of these Resolutions contains the following provision:

> BE IT FURTHER RESOLVED, that the Governing Board does hereby direct staff to return to the Governing Board with proposed amendments to [the SCAQMD Fleet Rules] to allow an exemption for the purchase of a conventionally fueled vehicle where the engine and control device have been approved by CARB to meet certification emission levels which achieve at least a 54 percent reduction in nitrogen oxide and a 71 percent reduction in particulate matter exhaust emissions from the currently available conventionally fueled engine (family) certification emission levels approved by CARB (as of the date of adoption of [the Fleet Rules]); . . .

77. In addition, paragraph (e)(6) of Rule 1193 states that "[u]pon demonstration to the Executive Officer that all existing solid waste collection vehicles equipped with 1995 and subsequent model year diesel engines in the fleet, have been equipped with CARB certified particulate matter control devices that achieve 71 percent or greater reductions in particulate matter emissions, a fleet operator may purchase dual-fuel vehicles pursuant to subparagraph (d)(1)(B) until July 1, 2003." (Rule 1193(e)(6).)

78. The foregoing provisions of the Governing Board Resolutions, as well as Rule 1193(e)(6), further confirm that the SCAQMD Fleet Rules are intended to effect quantitative reductions in emission levels from fleets of motor vehicles and motor vehicle engines. These provisions also confirm that the SCAQMD Fleet Rules establish certification or other approval requirements relating to the control of emissions from new motor vehicles or new motor vehicle engines as conditions precedent to the initial purchase and sale of diesel-fueled motor vehicles and engines.

Conclusions of Law

79. This Court has original jurisdiction over this action pursuant to 28 U.S.C. § 1331 because it arises under the Supremacy Clause, the laws of the United States, and 42 U.S.C. § 1983. Venue is proper in this District under 28 U.S.C. § 1391(b) because the SCAQMD's headquarters are located in this District, and because the SCAQMD Fleet Rules pertain to public fleets owned and operated in this District. (Complaint and Answer, ¶¶ 11-12.)

80. Section 209(a) of the CAA prohibits the SCAQMD from adopting or attempting to enforce "any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines." Section 209(a) also prohibits the SCAQMD from requiring any type of "certification . . . or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle as condition precedent to the initial retail sale . . . of such motor vehicle, motor vehicle engine, or equipment." 42 U.S.C. §7543(a).

81. The statutory term "standard relating to the control of emissions" means a requirement the purpose of which is to effect a general quantitative reduction in emissions. *See Assoc. of Intn'l Auto. Mfrs. v. Commissioner*, 208 F.3d 1, 6-7 (1st Cir. 2000); *Amer. Auto. Mfrs. Assoc. v. Cahill*, 152 F.3d 196, 200 (2nd Cir. 1998).

82. The SCAQMD Fleet Rules constitute standards relating to the control of emissions from new motor vehicles and new motor vehicle engines.

83. The SCAQMD Fleet Rules establish certification or other approval requirements relating to the control of emissions from new motor vehicles or new motor vehicle engines as conditions precedent to the purchase and sale of such motor vehicles or engines.

84. Through their adoption and attempts to enforce the SCAQMD Fleet Rules, the SCAQMD Defendants have adopted and are attempting to enforce standards relating to the control of emissions from new motor vehicles or new motor vehicle engines, and the SCAQMD Defendants also are establishing certification of other emissions-related approval requirements as conditions precedent to the initial purchase and sale of new motor vehicles or new motor vehicle engines.

85. The SCAQMD Fleet Rules violate the provisions of Section 209(a) of the CAA, and so are preempted and invalid under controlling federal law and the Supremacy Clause of the U.S. Constitution. U.S. Const., Art. VI, cl.2.

86. Section 177 of the CAA bars the SCAQMD from prohibiting or limiting, directly or indirectly, the sale of a new motor vehicle or motor vehicle engine that is certified in California as meeting California standards. 42 U.S.C. §7507.

87. Through their adoption and attempts to enforce the SCAQMD Fleet Rules, the SCAQMD Defendants have prohibited or limited, directly or indirectly, the purchase and sale of new motor vehicles or new motor vehicle engines that are certified in California as meeting California standards.

88. The SCAQMD Fleet Rules violate the provisions of Section 177 of the CAA, and so are preempted and invalid under controlling federal law and the Supremacy Clause of the U.S. Constitution.

89. Permanent injunctive relief against any attempted enforcement of the preempted and invalid SCAQMD Fleet Rules is warranted and should be granted.

DATED: March 23, 2001

Respectfully submitted,

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UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA,
WESTERN DIVISION

ENGINE MANUFACTURERS ASSOCIATION, Plaintiff, vs. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al., Defendants.	CASE NO. 00-09065 FMC (BQRx) **STATEMENT OF UNCONTROVERTED FACTS AND CONCLUSIONS OF LAW IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT BY DEFENDANT SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT** **[FRCP 56(b)]** Date: May 21, 2001 Time: 10:00 a.m. Courtroom: 750
NATURAL RESOURCES DEFENSE COUNCIL, INC.; COALITION FOR CLEAN AIR, INC.; COMMUNITIES FOR A BETTER ENVIRONMENT, INC.; PLANNING AND CONSERVATION LEAGUE; and SIERRA CLUB, Defendants-in-Intervention. WESTERN STATES PETROLEUM ASSOCIATION, Plaintiff-in-Intervention.	

After consideration of the papers in support of and in opposition to the Motion for Summary Judgment by Defendant South Coast Air Quality Management District and the oral argument of counsel, the Court determines that the following facts have been established as

UNCONTROVERTED FACTS

1. Rule 1191 of the South Coast Air Quality Management District (hereinafter referred to as "SCAQMD" or "the District") applies to governmental entities that own, lease or operate fleets of light-duty and medium-duty vehicles.

[Appendix of Exhibits to Motion for Summary Judgment by Defendant South Coast Air Quality Management District (hereafter "App. Exh.") 1 at 2].

2. Under Rule 1191, when the specified fleet operators add or replace vehicles in their fleets, those operators must acquire non-diesel powered vehicles that meet the low-emission vehicle standard established by the California Air Resources Board ("CARB"), or one of CARB's more stringent emissions standards.

[App. Exh. 1 at 3-4].

3. Rule 1192 of the SCAQMD applies to specified fleet operators in the District that are public entities that own, lease, or operate a fleet of 15 or more public transit vehicles or urban buses.

[App. Exh. 2 at 38-39.]

4. Rule 1192 of the SCAQMD also applies to specified fleet operators in the District that are private entities under contract with a government agency or a public transit agency to provide transit services.

[App. Exh. 2 at 38-39].

5. Under Rule 1192, when the specified fleet operators add or replace vehicles in their fleets, those operators must acquire alternative-fuel vehicles.

[App. Exh. 2 at 39].

6. Rule 1193 of the SCAQMD applies to specified fleet operators that are public or private entities that own, lease, or operate a fleet of 15 or more solid waste collection, transfer, or "rolloff" vehicles in the District.

[App. Exh. 3 at 77].

7. Under Rule 1193, when the specified fleet operators add or replace vehicles in their fleets, those operators must acquire alternative-fuel vehicles.

[App. Exh. 3 at 77].

8. Rule 1194 of the SCAQMD applies to specified fleet operators that are public or private entities that provide passenger transportation services in and out of commercial airports in the District.

[App. Exh. 4 at 88, 90-91].

9. Under Rule 1194, when the specified fleet operators that use passenger cars or medium-duty vehicles add or replace vehicles in their fleets, those operators must purchase or lease a specified percentage of vehicles that meet CARB's ultra low-emission vehicle standards or one of CARB's more stringent emissions standards.

[App. Exh. 4 at 90-91].

10. Under Rule 1994, when the specified fleet operators that use heavy-duty vehicles add or replace vehicles in their fleets, those operators must purchase or lease alternative fuel vehicles.

[App. Exh. 4 at 90-91].

11. Rule 1186.1 of the SCAQMD applies to specified operators in the District that own or lease at least 15 or more vehicles and provide street-sweeping services.

[App. Exh. 5 at 108].

12. Rule 1186.1 of the SCAQMD applies to specified fleet operators that are private entities under contract to provide street-sweeping services.

[App. Exh. 5 at 108].

13. Under Rule 1186.1, when the specified fleet operators add or replace street-sweepers in their fleets, those operators must purchase or lease alternative-fuel street-sweepers.

[App. Exh. 5 at 108-09].

14. Rule 1196 of the SCAQMD applies to specified fleet operators that own or lease 15 or more heavy-duty vehicles.

[App. Exh. 5 at 120-21].

15. Under Rule 1196, when the specified fleet operators add or replace heavy-duty vehicles, those operators must purchase or lease alternative-fuel vehicles, dual-fuel vehicles, or dedicated gasoline vehicles.

[App. Exh. 5 120-21].

16. Under California Health and Safety Code Section 43153, only vehicles that CARB has certified may be sold in California.

[Cal. Health & Safety Code § 43153].

17. Under Section 209 of the Clean Air Act, 42 U.S.C. § 7509, the State of California may apply to the federal Environmental Protection Agency for a waiver of preemption from the regulation of vehicles and vehicle engines.

[42 U.S.C. § 7509].

18. CARB has certified vehicles for purchase or lease that comply with Rules 1191, 1192, 1193, 1194, 1186.1, and 1196 of the SCAQMD.

[Declaration of Larry Irwin, ¶ 7].

Based on the Foregoing Uncontroverted Facts, the Court now makes its

CONCLUSIONS OF LAW

1. Rules 1191, 1192, 1193, 1194, 1186.1, and 1196 of the SCAQMD do not establish or enforce standards relating to the control of emissions from new motor vehicles or new motor vehicle engines within the meaning of Section 209 of the Clean Air Act, 42 U.S.C.§ 7509.

2. Rules 1191, 1192, 1193, 1194, 1186.1, and 1196 of the SCAQMD do not require any certification, inspection, or approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as a condition precedent to the initial sale, titling, or registration of such motor vehicle, motor vehicle engine, or equipment within the meaning of Section 209 of the Clean Air Act, 42 U.S.C.§ 7509.

3. Rules 1191, 1192, 1193, 1194, 1186.1, and 1196 of the SCAQMD do not prohibit or limit, directly or indirectly, the manufacture or sale of a new motor vehicle or motor vehicle engine that is certified in California as

meeting California standards within the meaning of Section 177 of the Clean Air Act, 42 U.S.C. § 7507.

4. Rules 1191, 1192, 1193, 1194, 1186.1, and 1196 of the SCAQMD do not create, or have the effect of creating, a motor vehicle or motor vehicle engine different than a motor vehicle or engine certified in California under California standards ("a third vehicle") or otherwise create such a "third vehicle" within the meaning of Section 177 of the Clean Air Act, 42 U.S.C. § 7507.

5. Rules 1191, 1192, 1193, 1194, 1186.1, and 1196 of the SCAQMD are not preempted under the Supremacy Clause of the United States Constitution.

6. Substantial evidence in the District's administrative record for Rules 1191, 1192, 1193, 1194, 1186.1, and 1196 supports the District's conclusion that fuels such as methanol and natural gas are equivalently clean-burning alternative fuels within the meaning of California Health and Safety Code Section 40447.5.

7. The District did not violate California Health and Safety Code Section 40447.5 in adopting Rules 1191, 1192, 1193, 1194, 1186.1, and 1196.

8. Rules 1191, 1192, 1193, 1194, 1186.1, and 1196 of the SCAQMD were lawfully enacted and are lawful and valid in all respects.

Dated: March ___, 2001

HON. FLORENCE-MARIE COOPER
United States District Court Judge
Central District of California

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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENGINE MANUFACTURERS ASSOCIATION, Plaintiff, v. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al., Defendants. NATURAL RESOURCES DEFENSE COUNCIL, INC., COALITION FOR CLEAN AIR, INC., COMMUNITIES FOR A BETTER ENVIRONMENT,	Case No. 00-09065 FMC (BQRx) DECLARATION OF JOHN W. DUERR IN SUPPORT OF PLAINTIFF ENGINE MANUFACTURERS ASSOCIATION'S MOTION FOR SUMMARY JUDGMENT Date: May 21, 2001 Time: 10:00 a.m. Courtroom: 750

INC., PLANNING AND CONSERVATION LEAGUE, and SIERRA CLUB, Intervenors.	Honorable Florence-Marie Cooper United States District Judge
WESTERN STATES PETROLEUM ASSOCIATION, Intervenor.	(Filed Mar. 23, 1001)

I, John W. Duerr, declare as follows:

1. I am employed by Detroit Diesel Corporation as Manager, Regulatory Activities. I have personal knowledge of the facts stated in this declaration, except those facts stated on information and belief, and if called to testify as a witness to such matters under oath, I could and would competently testify thereto. As to those matters stated upon information and belief, I am informed and believe and on that basis declare such facts are true to the best of my knowledge.

2. Detroit Diesel Corporation ("DDC") is a member of the Engine Manufacturers Association. DDC makes many models of internal combustion engines, including various compression-ignition diesel-fueled engines for use in several types of heavy-duty on-highway motor vehicles, such as trucks and buses.

3. Before a new heavy-duty diesel-fueled motor vehicle engine may be sold in the United States, it must be certified by the United States Environmental Protection Agency ("EPA") as meeting all applicable EPA emission-control regulations and standards. As part of the on-highway engine certification process, DDC submits detailed engine

emission testing data and other information to demonstrate that an on-highway engine model complies with the applicable engine emission standards, including the emission standards for oxides of nitrogen, hydrocarbons, carbon monoxide, and particulate matter emissions. If, based on the submitted information, EPA is satisfied that an on-highway engine model meets the applicable emission standards, EPA will issue a certificate that certifies the engine model for sale during the next model year.

4. California has its own emission standards applicable to new heavy-duty on-highway diesel-fueled motor vehicle engines sold into California. Accordingly, DDC follows a similar process of submitting engine testing data and other information to the California Air Resources Board ("ARB") to obtain engine certification. Like EPA, if the ARB is satisfied, based on the information submitted, that an on-highway engine model satisfies the applicable ARB emission standards and requirements, then the ARB will issue an Executive Order approving the sale of the heavy-duty on-highway engine model during the next model year.

5. DDC has followed the required data submittal process and has received certification from ARB and EPA for the sale of various models of on-highway diesel-fueled engines during the 2001 model year. A schedule of DDC's heavy-duty on-highway diesel-fueled engines that the ARB has certified for sale in California for the 2001 model year is appended to this declaration as Exhibit 1.

6. Upon information and belief, it is my understanding that the South Coast Air quality Management District ("SCAQMD") has adopted a series of rules (the "SCAQMD Fleet Rules") that prohibit or limit certain local fleet

operators from acquiring on-highway diesel-fueled motor vehicles and engines. Based on that understanding, Exhibit 1 lists the on-highway diesel-fueled motor vehicle engine models that DDC manufactures, and that are currently certified by the ARB for sale in California, the purchase and sale of which is prohibited or limited under the SCAQMD Fleet Rules.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 23rd day of March, 2001.

/s/ John W. Duerr
JOHN W. DUERR

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DDC DIESEL-FUELED ENGINE FAMILIES CERTIFIED FOR 2001

ON-HIGHWAY

Engine Family	Engine Type	EPA Cert. Effective Date	EPA Certificate Effective Number	CARB EO Effective Date	CARB EO NUMBER
1DDXH08.5FJY	Series 50 Bus - EGR	5-8-00	DDX-URB-01-01	5-18-00	A-290-89
1DDXH08.5EJL	Series 50 Truck	12-8-00	DDX-HHDD-01-03	1-16-01	A-290-92
1DDXH08.5EJB	Series 50 – 350 Truck	12-8-00	DDX-HHDD-01-02	1-16-01	A-290-91
1DDXH12.7EGL	Series 60, 12.7L	12-8-00	DDX-HHDD-01-04	1-16-01	A-290-93
1DDXH14.0ELL	Series 60, 14.0L	12-8-00	DDX-HHDD-01-01	1-16-01	A-290-94

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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENGINE MANUFACTURERS ASSOCIATION, Plaintiff, v. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al., Defendants. NATURAL RESOURCES DEFENSE COUNCIL, INC., COALITION FOR CLEAN AIR, INC., COMMUNITIES FOR A BETTER ENVIRONMENT,	Case No. 00-09065 FMC (BQRx) DECLARATION OF EUGENE M. SWEENEY IN SUPPORT OF PLAINTIFF ENGINE MANUFACTURERS ASSOCIATION'S MOTION FOR SUMMARY JUDGMENT Date: May 21, 2001 Time: 10:00 a.m. Courtroom: 750

INC., PLANNING AND CONSERVATION LEAGUE, and SIERRA CLUB, Intervenors.	)	Honorable Florence-Marie Cooper United States District Judge
WESTERN STATES PETROLEUM ASSOCIATION, Intervenor.	)	(Filed Mar. 23, 2001)

I, Eugene M. Sweeney, declare as follows:

1. I am employed by Caterpillar Inc. as Manager of Technical Support. I have personal knowledge of the facts stated in this declaration, except those facts stated on information and belief, and if called to testify as a witness to such matters under oath, I could and would competently testify thereto. As to those matters stated upon information and belief, I am informed and believe and on that basis declare such facts are true to the best of my knowledge.

2. Caterpillar Inc. ("Caterpillar") is a member of the Engine Manufacturers Association. Caterpillar makes many models of internal combustion engines, including various compression-ignition diesel-fueled engines for use in several types of on-highway motor vehicles, such as vans, trucks and buses.

3. Before a new on-highway diesel-fueled motor vehicle engine may be sold in the United States, it must be certified by the United States Environmental Protection Agency ("EPA") as meeting all applicable EPA emission-control regulations and standards. As part of the on-highway engine certification process, Caterpillar submits

detailed engine emission testing data to demonstrate that an on-highway engine model complies with the applicable engine emission standards, including the emission standards for oxides of nitrogen, hydrocarbons, carbon monoxide, and particulate matter emissions. If, based on the submitted data, EPA is satisfied that an on-highway engine model meets the applicable emission standards, EPA will issue a certificate that certifies the engine model for sale during the next model year.

4. California has its own emission standards applicable to new on-highway diesel-fueled motor vehicle engines sold into California. Accordingly, Caterpillar follows a similar process of submitting engine testing data to the California Air Resources Board ("CARB") to obtain engine certification. Like EPA, if the CARB is satisfied, based on the engine test data submitted, that an on-highway engine model satisfies the applicable CARB emission standards and requirements, then the CARB will issue an Executive Order approving the sale of the on-highway engine model during the next model year.

5. Caterpillar has followed the required data submittal process and has received certification from CARB and EPA for the sale of various models of on-highway diesel-fueled engines during the 2001 model year. A schedule of Caterpillar's on-highway diesel-fueled engines that the CARB has certified for sale in California for the 2001 model year is appended to this declaration as Exhibit 1.

6. Upon information and belief, it is my understanding that the South Coast Air quality Management District ("SCAQMD") has adopted a series of rules (the "SCAQMD Fleet Rules") that prohibit or limit certain local fleet operators from acquiring on-highway diesel-fueled motor

vehicles and engines. Based on that understanding, Exhibit 1 lists the on-highway diesel-fueled motor vehicle engine models that Caterpillar manufactures, and that are currently certified by the CARB for sale in California, the purchase and sale of which is prohibited or limited under the SCAQMD Fleet Rules.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 22nd day of March, 2001.

/s/ Eugene M. Sweeney
EUGENE M. SWEENEY

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CATERPILLAR DIESEL-FUELED ON-HIGHWAY ENGINE FAMILIES CERTIFIED FOR 2001

Model	Engine Family	EPA Eff. Date	EPA Cert. No.	CARB EO Eff. Date	CARB EO No.
3126E (Bank)	1CPXH0442HBK	1/29/01	CPX-MHDD-01-05.1	2/9/01	A-13-143
3126E	1CPXH0442HRK	12/21/00	CPX-MHDD-01-02	12/21/00	A-13-138
3126E (LEV)	1CPXHL442HAK	8/2/00	CPX-MHDD-01-01.8	8/8/00	A-13-137
C10	1CPXH0629ERK	12/21/00	CPX-HHDD-01-01	12/21/00	A-13-139
C12	1CPXH0729ERK	12/21/00	CPX-HHDD-01-02	12/21/00	A-13-140
C15	1CPXH089ERK	12/21/00	CPX-HHDD-01-03	12/21/00	A-13-141
C16	1CPXH0967ERK	12/21/00	CPX-HHDD-01-04	12/21/00	A-13-142

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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENGINE MANUFACTURERS ASSOCIATION, Plaintiff, v. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al., Defendants. NATURAL RESOURCES DEFENSE COUNCIL, INC., COALITION FOR CLEAN AIR, INC., COMMUNITIES FOR A BETTER ENVIRONMENT,	Case No. 00-09065 FMC (BQRx) DECLARATION OF STEVEN R. BUTLER IN SUPPORT OF PLAINTIFF ENGINE MANUFACTURERS ASSOCIATION'S MOTION FOR SUMMARY JUDGMENT Date: May 21, 2001 Time: 10:00 a.m. Courtroom: 750

INC., PLANNING AND CONSERVATION LEAGUE, and SIERRA CLUB, Intervenors.	)	Honorable Florence-Marie Cooper United States District Judge
WESTERN STATES PETROLEUM ASSOCIATION, Intervenor.	)	

I, Steven R. Butler, declare as follows:

1. I am employed by Cummins Inc. as an Engine Certification Director. I have personal knowledge of the facts stated in this declaration, except those facts stated on information and belief, and if called to testify as a witness to such matters under oath, I could and would competently testify thereto. As to those matters stated upon information and belief, I am informed and believe and on that basis declare such facts are true to the best of my knowledge.

2. Cummins Inc. ("Cummins") is a member of the Engine Manufacturers Association. Cummins makes many models of internal combustion engines, including various compression-ignition diesel-fueled engines for use in several types of on-highway motor vehicles, such as vans, trucks and buses.

3. Before a new diesel-fueled motor vehicle engine may be sold in the United States, it must be certified by the United States Environmental Protection Agency ("EPA") as meeting all applicable EPA emission-control regulations and standards. As part of the on-highway engine certification process, Cummins submits detailed

engine emission testing data to demonstrate that an on-highway engine model complies with the applicable engine emission standards, including the emission standards for oxides of nitrogen, hydrocarbons, carbon monoxide, and particulate matter emissions. If, based on the submitted data, EPA is satisfied that an on-highway engine model meets the applicable emission standards, EPA will issue a certificate that certifies the engine model for sale during the next model year.

4. California has its own emission standards applicable to new on-highway diesel-fueled motor vehicle engines sold into California. Accordingly, Cummins follows a similar process of submitting engine testing data to the California Air Resources Board ("ARB") to obtain engine certification. Like EPA, if the ARB is satisfied, based on the engine test data submitted, that an on-highway engine model satisfies the applicable ARB emission standards and requirements, then the ARB will issue an Executive Order approving the sale of the on-highway engine model during the next model year.

5. Cummins has followed the required data submittal process and has received certification from ARB and EPA for the sale of various models of on-highway diesel-fueled engines during the 2001 model year. A schedule of Cummins' on-highway diesel-fueled engines that the ARB has certified for sale in California for the 2001 model year is appended to this declaration as Exhibit 1.

6. Upon information and belief, it is my understanding that the South Coast Air Quality Management District ("SCAQMD") has adopted a series of rules (the "SCAQMD Fleet Rules") that prohibit or limit certain local fleet

operators from acquiring on-highway diesel-fueled motor vehicles and engines. Based on that understanding, Exhibit 1 lists the on-highway diesel-fueled motor vehicle engine models that Cummins manufactures, and that are currently certified by the ARB for sale in California, the purchase and sale of which is prohibited or limited under the SCAQMD Fleet Rules.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 23rd day of March, 2001.

/s/ Steven R. Butler
STEVEN R. BUTLER

CUMMINS 2001 CARB DIESEL AUTOMOTIVE ENGINE FAMILY

CUMMINS 2001 CARB DIESEL AUTOMOTIVE ENGINE FAMILIES

MILY	EPA Family Name	CARB EO #	CPL No.s	COMMENTS	HP Range
93A4	1CEXH0855NAD	Not available	2592	99N14+ NE3	435 - 525
093A5	1CEXH0855NAE	Not available	2591	99N14+ NE2	370 - 475
093A6	1CEXH0855NAF	Not available	2590	99N14+ NE1	350 - 425
103E	1CEXH0912XAE	A-21-301	2834	99 APEX	475 - 600
103C	1CEXH0912XAC	A-21-299	2629	99 ISX	475 - 500
103D	1CEXH0912XAD	A-21-300	2628, 8046	99 ISX	400 - 450
353Q	1CEXH0661MAQ	A-21-297	2350, 2608	99 ISM LE2	330 - 500
353R	1CEXH0661MAR	A-21-298	2607	99 ISM LE1	280 - 350
353P	1CEXH0661MAP	Not available	2201	99 UBUS	280 - 330
563A	1CEXH0540LAA	A-21-304	2475, 2946	ISL	310 - 370
563B	1CEXH0540LAB	Not available	8042	ISL UBUS	330
383D	1CEXH0239BAD	A-21-289	2938	4B ECHO	145 - 170
383E	1CEXH0239BAE	A-21-290	8057	4B ECHO CFFV	145 - 170
403Z	1CEXA0359BAZ	A-21-288	2903	Chrys CARB	235 - 245
403O	1CEXH0359BAO	A-21-292	2595,-96,-97	CFF with CAT	185 - 215
403U	1CEXH0359BAU	A-21-293	2981, 2682	2000 ISB	
403V	1CEXH0359BAV	A-21-294	2683,-84,-85, -86,-87	2000 ISB	260 - 300
13M	1CEXH0505CAM	A-21-291	2236, 2237	ISC UBUS	250 - 280
413N	1CEXH0505CAN	Not available	2694, 2695	2000 ISC	330 - 350
413O	1CEXH0505CAO	Not available	2691, -92, -93, -94	2000 ISC	260 - 315
413P	1CEXH0505CAP	Not available	2688, -89, -90	2000 ISC	225 - 260

E.O.s marked "Not available" have not been issued at this time (2/8/00) but are in process and we should have them soon.

Families 093A6, 353R and 413O will be impacted by Rule 1193

Families 095A5, 103D, and 353Q will be impacted by Rule 1196

Family 403U will be impacted by Rule 1191.

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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENGINE MANUFACTURERS ASSOCIATION, Plaintiff, v. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al., Defendants.	Case No. 00-09065 FMC (BQRx) **DECLARATION OF JEFFREY A. MARSEE IN SUPPORT OF PLAINTIFF ENGINE MANUFACTURERS ASSOCIATION'S MOTION FOR SUMMARY JUDGMENT** Date: May 21, 2001 Time: 10:00 a.m. Courtroom: 750

NATURAL RESOURCES DEFENSE COUNCIL, INC., COALITION FOR CLEAN AIR, INC., COMMUNITIES FOR A BETTER ENVIRONMENT, INC., PLANNING AND CONSERVATION LEAGUE, and SIERRA CLUB, Intervenors.	) Honorable Florence-Marie Cooper) United States District Judge) (Filed Mar. 23, 2001)
WESTERN STATES PETROLEUM ASSOCIATION, Intervenor.	)

I, Jeffrey A. Marsee, declare as follows:

1. I am employed by Isuzu Motors America, Inc. as Manager of Vehicle Compliance. I have personal knowledge of the facts stated in this declaration, except those facts stated on information and belief, and if called to testify as a witness to such matters under oath, I could and would competently testify thereto. As to those matters stated upon information and belief, I am informed and believe and on that basis declare such facts are true to the best of my knowledge.

2. Isuzu Motors America, Inc. ("Isuzu") is a member of the Engine Manufacturers Association. Isuzu is involved in the certification process for many models of internal combustion engines, including various compression-ignition diesel-fueled engines for use in several types of on-highway motor vehicles, such as vans, trucks and buses.

3. Before a new diesel-fueled motor vehicle engine may be sold in the United States, it must be certified by the United States Environmental Protection Agency ("EPA") as meeting all applicable EPA emission-control regulations and standards. As part of the on-highway engine certification process, Isuzu submits detailed engine emission testing data to demonstrate that an on-highway engine model complies with the applicable engine emission standards, including the emission standards for oxides of nitrogen, hydrocarbons, carbon monoxide, and particulate matter emissions. If, based on the submitted data, EPA is satisfied that an on-highway engine model meets the applicable emission standards, EPA will issue a certificate that certifies the engine model for sale during the next model year.

4. California has its own emission standards applicable to new on-highway diesel-fueled motor vehicle engines sold into California. Accordingly, Isuzu follows a similar process of submitting engine testing data to the California Air Resources Board ("ARB") to obtain engine certification. Like EPA, if the ARB is satisfied, based on the engine test data submitted, that an on-highway engine model satisfies the applicable ARB emission standards and requirements, then the ARB will issue an Executive Order approving the sale of the on-highway engine model during the next model year.

5. Isuzu has followed the required data submittal process and has received certification from ARB and EPA for the sale of various models of on-highway diesel-fueled engines during the 2001 model year. A schedule of Isuzu's on-highway diesel-fueled engines that the

ARB has certified for sale in California for the 2001 model year is appended to this declaration as Exhibit 1.

6. Upon information and belief, it is my understanding that the South Coast Air Quality Management District ("SCAQMD") has adopted a series of rules (the "SCAQMD Fleet Rules") that prohibit or limit certain local fleet operators from acquiring on-highway diesel-fueled motor vehicles and engines. Based on that understanding, Exhibit 1 lists the on-highway diesel-fueled motor vehicle engine models that Isuzu manufacturers,' and that are currently certified by the ARB for sale in California, the purchase and sale of which is prohibited or limited under the SCAQMD Fleet Rules.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 23th [sic] day of March, 2001.

/s/ Jeffrey A. Marsee
JEFFREY A. MARSEE

Isuzu Engine Families for California

- **Inline 6 Cylinder (6H) Model YSZXH07.84RA.**
- **Inline 4 Cylinder (4H) Model YSZXH04.83AA**

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UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA
WESTERN DIVISION

ENGINE MANUFACTURERS ASSOCIATION, Plaintiff, vs. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al., Defendants.	CASE NO. 00-09065 FMC (BQRx) **DECLARATION OF LARRY IRWIN IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT BY DEFENDANT SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT** **[FRCP 56(b)]** Date: May 21, 2001 Time: 10:00 a.m. Courtroom: 750
NATURAL RESOURCES DEFENSE COUNCIL, INC.; COALITION FOR CLEAN AIR, INC.; COMMUNITIES FOR A BETTER ENVIRONMENT, INC.; PLANNING AND CONSERVATION LEAGUE, and SIERRA CLUB, Defendants-in-Intervention.	

I, Larry Irwin, declare:

1. I am an Air Quality Specialist in the Planning Division of the South Coast Air Quality Management District with responsibility for mobile source rule implementation. For the past ten years, my primary duties have been mobile source rule development and implementation. Among my job responsibilities are monitoring the development and use of alternative fuel

vehicles and the availability of alternative fuel vehicles. I have a Bachelor of Science degree in physics from Ohio State University.

2. The California Air Resources Board ("CARB") has the responsibility for regulating emissions of air pollutants from motor vehicles operated in California. CARB accordingly administers exhaust emissions standards for various classes of new motor vehicle-passenger cars, light-duty trucks, medium-duty vehicles, and engines used in heavy-duty vehicles.

3. In 1990-1991, CARB adopted the California Low-Emission Vehicle (LEV) regulations for cars, light-duty trucks, and medium-duty vehicles. Every new car, light-duty truck, or medium-duty vehicle offered for sale in California must be certified by CARB as complying with the LEV regulations. The LEV regulations consist of tailpipe emissions standards and four increasingly stringent, low-emission vehicle categories to which each vehicle must be certified. The categories are Transitional Low-Emission Vehicle, Low-Emission Vehicle, Ultra-Low-Emission Vehicle, and Zero-Emission Vehicle. The LEV regulations also require that for each model year between 1994 and 2003, manufacturers must identify the average emissions level of non-methane organic gases (NMOG) to which its fleet of cars and light trucks was certified, and then, on certain target dates, meet an incrementally more stringent fleet average NMOG level for its fleet.

4. CARB also has adopted exhaust emissions standards for heavy-duty engines. All heavy-duty engines offered for sale in California must meet CARB's exhaust emissions standards.

5. The Fleet Rules are expressly designed to work in tandem with CARB's certification process. Each of the Fleet Rules requires fleet operators to purchase certified vehicles in the lower-polluting categories. The vehicles meeting the Fleet Rules requirements are currently available and certified for use in California. In fact, as a result of the production component of CARB's rules, manufacturers must produce some vehicles in some of the cleaner emissions classes for sale in California.

6. The Fleet Rules rely on CARB's determinations and requirements regarding vehicle emission levels. The purpose of the Fleet Rules is to require fleet operators to purchase the lower-emitting certified vehicles when they are available. If, for some unexpected reason, lower-polluting vehicles are unavailable for purchase from dealers or from engine and vehicle manufacturers, the Fleet Rules allow fleet operators to purchase higher-polluting certified vehicles.

7. Attached to my declaration is a list of vehicles that CARB has certified and that meet the requirements of the Fleet Rules. The list is broken down into categories corresponding to each of the individual Fleet Rules. I compiled the list by examining (1) vehicle data supplied to me by CARB, and (2) executive orders issued by CARB that specify CARB's emissions certifications.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this twenty-first day of March, 2001, at Diamond, Bar, California.

/s/ Larry Irwin
Larry Irwin, Declarant

EXHIBIT TO DECLARATION OF LARRY IRWIN

AQMD Rule 1191 Compliant

Medium-Duty Engines and Incomplete Vehicles
MY2001

ARB Exective Order Data

INCOMPLETE MEDIUM-DUTY VEHICLES

Vehicle Manufacturer	Engine Mfr	Executive Order	Fuel	Engine Family	Liter Disp	CID	HP	Emis Std	MODELS
GFI	GFI	A-325-30	LPG or Gaso	1G9XH06.87CP	6.8	417	310	ULEV	F-350 (Ford evaporative control system)
	GFI	A-325-29	LPG or Gaso	1G9XH06.87CP	6.8	417	310	ULEV	V 10 GFP (Torque 425)
Ford	Ford	A-10-987	Gasoline	1FMXH06.8TH5	6.8	417	310	ULEV	E-350: Commercial Cutaway, RV Cutaway, Commercial Stripped Chassis. E-Super Duty Cutaway F-350 Reg Cab, Sub Cab, Crew Cab.
Ford	Ford	A-10-992	Gasoline	1FMXH05.4TH5	5.4	326	255	ULEV	E-Series, E-350 F-Series F-250HD F-350

MEDIUM-DUTY ENGINES

Engine Mfr	Executive Order	Fuel	Engine Family	Liter Disp	CID	HP	Emis Std	MODELS
Ford	A-10-986	Gasoline	1FMXH06.8TH5	6.8	417	310	ULEV	E series, F Series
Ford	A-10-991	Gasoline	1FMXH05.4TH5	5.4	326	255	ULEV	E series, F Series

AQMD Rule 1191 Compliant

Medium-Duty Vehicles
MY2000

sorted by Mfr.

	A	B	C	D	E	F	G	H	I
1	MFR	ARB Exec Order	Engine Family	VEH CLS	EXH STD	EXH FUEL TYPE	EXH CERT FUEL	ECS TYPE	MODELS
2	BMW	A-8-122	YBMXT04.453M	M2	LEV	DED	PH2	2TWC,2H02S(2),SFI,AIR	BMW
3	CHRY	A-9-462-1	YCRXA0360H32	M2	LEV	DED	PH2	HO2S(2),SFI,TWC	DODGE
4	CHRY	A-9-464	YCRXA0360H31	M2	LEV	DED	PH2	2WUOC,2HO2S(2),TWC,SFI	DODGE
5	CHRY	A-9-465	YCRXA0360J31	M3	LEV	DED	PH2	2WUOC,2HO2S(2),TWC,SFI	DODGE
6	CHRY	A-9-462	YCRXA0360H32	M2	LEV	DED	PH2	HO2S(2),TWC,SFI	DODGE
7	FORD	A-10-898	YFMXA04.2JGC	M3	LEV	DED	IND	2TWC(2),2HO2S(2),SFI,EGR	FORD
8	FORD	A-10-906	YFMXA05.4HGC	M2	LEV	DED	PH2	2TWC(2),2HO2S(2),SFI,EGR	FORD
9	FORD	A-10-905	YFMXA05.4RF7	M3	LEV	DED	IND	2TWC(2),2HO2S(2),SFI,EGR; 2TWC,TWC,2HO2S,HO2S,EGR,SFI	FORD, LINCOLN
10	FORD	A-10-900	YFMXA04.6HGC	M2	LEV	DED	PH2	2TWC(2),2HO2S(2),SFI,EGR	FORD
11	FORD	A-10-904	YFMXA05.4JGP	M3	LEV	DED	IND	TWC,2HO2S,HO2S,SFI,EGR	FORD
12	FORD	A-10-910	YFMXA06.8JGC	M3	LEV	DED	PH2	2TWC,TWC,2HO2S,H02S,SFI,EGR	FORD
13	FORD	A-10-901	YFMXA04.66FF	M3	LEV	DED	IND	2TWC(2),2HO2S(2),SFI,EGR	FORD
14	FORD	A-10-897	YFMXT04.2HGC	M2	LEV	DED	IND	2TWC(2),2HO2S(2),SFI,EGR	FORD
15	FORD	A-10-909	YFMXA06.8JGN	M3	LEV	DED	PH2	TWC,2HO2S,H02S,SFI,EGR	FORD
16	GM	A-6-920	YGMXA05.3184	M3	LEV	DED	PH2	SFI,EGR,2TWC,2HO2S(2),AIR	CHEVROLET, GMC
17	GM	A-6-914	YGMXA04.3192	M2	LEV	DED	PH2	SFI,EGR,TWC,HO2S(2),AIR,WU-TWC	CHEVROLET, GMC
18	GM	A-6-919	YGMXA05.3183	M2	LEV	DED	PH2	SFI,EGR,2TWC,2HO2S(2),AIR	CHEVROLET, GMC
19	GM	A-6-922	YGMXA05.7194	M2	LEV	DED	PH2	SFI,EGR,2TWC,2HO2S(2),AIR	CHEVROLET, GMC
20	GM	A-6-923	YGMXA05.7185	M3	LEV	DED	PH2	SFI,EGR,2TWC,2HO2S(2),AIR	CHEVROLET, GMC,CADILLAC
21	GM	A-6-912	YGMXA04.3190	M2	LEV	DED	PH2	SFI,EGR,2TWC,2HO2S(2),AIR	CHEVROLET, GMC
22	MB	A-3-196	YMBXT04.3GNB	M2	LEV	DED	PH2	SFI,AIR,EGR,2HO2S(2),2WU-TWC, 2TWC	MERCEDES-BENZ
23	MB	A-3-197	YMBXT05.5GNB	M2	LEV	DED	PH2	SFI,AIR,EGR,2HO2S(2),2WU-TWC, 2TWC	MERCEDES-BENZ
24	MB	A-3-194	YMBXT03.2GNB	M2	LEV	DED	PH2	SFI,AIR,EGR,2HO2S(2),2WU-TWC, 2TWC	MERCEDES-BENZ
25	ROVR	A-277-21	YLRXT04.6002	M2	LEV	DED	PH2	2TWC,SFI,2HO2S(2),AIR	LAND ROVER
26	TOTA	A-14-379	YTYXT04.7GBX	M3	LEV	DED	PH2	SFI,2TWC(2),2HO2S(2)	TOYOTA, LEXUS
27	TOTA	A-14-378	YTYXT04.7GXW	M2	LEV	DED	PH2	SFI, 2TWC,TWC,2HO2S(2)	TOYOTA
28	CHRY	A-9-469	YCRXT05.26RC	M3	SULEV	DED	CNG	TWC,OC,SFI,2HO2S	CHRYSLER
29	FORD	A-10-907	YFMXT05.4RP5	M3	SULEV	DED	CNG	2TWC(2),TWC,2HO2S,SFI	FORD
30	FORD	A-10-908	YFMXT05.4RP6	M3	SULEV	DED	CNG	2TWC,TWC,2HO2S,SFI	FORD
31	CHRY	A-9-461	YCRXA0287H41	M2	ULEV	DED	PH2	2HO2S(2),2WUOC,SFI,TWC	DODGE
32	GM	A-6-911	YGMXA04.3189	M2	ULEV	DED	PH2	SFI,EGR,TWC,2HO2S(2),HO2S, WU-TWC	CHEVROLET, GMC

Received 12/1/99

AQMD Rule 1192 Compliant

Heavy-Duty Engines and Incomplete Vehicles
MY2001

ARB Executive Order Data

HEAVY-DUTY ENGINES									
Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
Deere	A-108-22	CNG	Urban Bus	1JDXH08.1001	8.1	497	280	900	6081H

AQMD Rule 1192 Compliant

Heavy-Duty Engines
MY2000

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T
1	ARB Executive Order	Manufacturer	Engine Family	Max BHP	MAX RPM	CERT Type	Fuel Type	CERT FUEL	Service Class	ECS_TYPE	THC	NMHC	CO	NOx	Opt NOx Std	PM	MODELS
3	A-21-280-1	Cummins	YCEXH0505CBJ	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0.2	0.6	1.7	2.5	0.01	C8.3-275G
4	A-21-285	Cummins	YCEXH0359BBL	195	2800	DSL	NG	LPG	BUS	PCM,TC,CAC,OC,HO2S	0.8		1	2.3	2.5	0.01	B5.9-195 LPG
5	A-290-83	DDC	YDDXH08.5FJG	275	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0.8	2.2	1.5	2.0	0.01	CNG, LNG SERIES 50G
6	A-290-85	DDC	YDDXH08.5FJF	275	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0.8	2.2	1.5		0.01	CNG, LNG SERIES 50G
7	A-21-283	Cummins	YCEXH0505CBI	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0.6	0.9	1.837	2.5	0.02	C8.3-275G, C8.3-250G
8	A-21-284	Cummins	YCEXH0359BBK	230	2800	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0.06	2.7	1.83	2.5	0.02	B5.9-230G, B5.9-195, B5.9-150G
9	A-290-81	DDC	YDDXH12.7FGF	330	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0.8	2	2		0.02	CNG, LNG SERIES 60G
10	A-290-84	DDC	YDDXH12.7FGG	330	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0.8	2	2	2.5	0.02	CNG, LNG SERIES 60G
11	A-290-87	DDC	YDDXH12.7FGF	330	2100	DSL	NG	CNG	BUS	ECM		0.8	2	2		0.02	CNG, LPG SERIES 60G
12	A-21-287	Cummins	YCEXH0505CBG	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,HO2S		1.1	7.1	2.19		0.07	C8.3-275G, C8.3-250G
13	A-21-286	Cummins	YCEXH0359BBJ	230	2800	DSL	NG	CNG	BUS	PCM,TC,CAC,HO2S	0.1		7.2	2.72		0.08	B5.9-230G, B5.9-195G, B5.9-150G

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Heavy-Duty Engines and Incomplete Vehicles
MY2001

ARB Executive Order Data

INCOMPLETE HEAVY-DUTY VEHICLES

Vehicle Mfr	Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
Mack	Mack	A-27-82	CNG/LNG	HHD	1MKXH11.9G58	11.9	787	325	1050	MR, LE, CH
IMPCO	IMPCO	A-328-19	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	GMC/Chevrolet: C6500, C7500, C8500, B7500
IMPCO	IMPCO	A-328-19-1	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	GMC/Chevrolet: C6500, C7500, C8500, B7500
IMPCO	IMPCO	A-328-21	LPG	HDG2	1TJXH08.1505	8.1	496	276	395	GMC/Chevrolet: C6500, C7500, C8500, B7500
GFI	GFI	A-325-32	LPG or Gaso	HDG2	1G9XH06.88CP	6.8	417	310	425	F-450, F-550
Ford	Ford	A-10-983	Gasoline	HDG2	1FMXH06.8CH5	6.8	417	305	425	F-450, F-550
Ford	Ford	A-10-985	Gasoline	HDG2	1FMXH06.8CF5	6.8	417	305	420	E-Series, E-350, E-450
Ford	Ford	A-10-990	Gasoline	HDG2	1FMXH05.4CF5	5.4	326	255	350	E-Series, E-350
GM	GM	A-6-979	Gasoline	HDG2	1GMXH08.1513	8.1	496	340	455	CK30
GM	GM	A-6-1004	Gasoline	HDG2	1GMXH08.1512	8.1	496	270	400	B7, C6, C7
GM	GM	A-6-1008	Gasoline	HDG2	1GMXH08.1502	8.1	496	270	400	B7, C6, C7

HEAVY-DUTY ENGINES

Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
Mack	A-27-81	CNG/LNG	HHD	1MKXH11.9G58	11.9	787	325	1050	E7G325
IMPCO	A-328-18	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	L19LPG
IMPCO	A-328-20	LPG	HDG2	1TJXH08.1505	8.1	496	276	395	L18LPG
Ford	A-10-982	Gasoline	HDG2	1FMXH06.8CH5	6.8	417	310	425	F-Series
Ford	A-10-984	Gasoline	HDG2	1FMXH06.8CF5	6.8	417	305	420	E-Series
Ford	A-10-989	Gasoline	HDG2	1FMXH05.4CF5	5.4	326	255	350	E-Series
GFI	A-325-31	Gasoline	HDG2	1G9XH06.88CP	6.8	417	310	425	V-10 GFP
GM	A-6-997	Gasoline	HDG2	1GMXH05.7582	5.7	350	250	330	L31
GM	A-6-1001	Gasoline	HDG2	1GMXH08.1502	8.1	496	270	400	L18
GM	A-6-1002	Gasoline	HDG2	1GMXH08.1503	8.1	496	340	455	L18
GM	A-6-1003	Gasoline	HDG2	1GMXH08.1512	8.1	496	270	400	L18
GM	A-6-1009	Gasoline	HDG2	1GMXH08.1503	8.1	496	340	455	CK30, P30
GM	A-6-1016	Gasoline	HDG2	1GMXH08.1513	8.1	496	340	455	L18

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Heavy-Duty Engines
MY2000

sorted by PM

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T
1	ARB Executive Order	Manufacturer	Engine Family	Max BHP	MAX RPM	CERT Type	Fuel Type	CERT FUEL	Service Class	ECS_TYPE	THC	NMHC	CO	NOx	Opt NOx Std	PM	MODELS
7	A-118-21	Deere	YJDXH08.1003	254	2200	DSL	NG	CNG	MHD	ECM,TC,CAC,02S	-	0.4	1.8	2.2	2.5	0.02	6081H
13	A-27-77	Mack	YMKXH11.9G55	350	1800	DSL	NG	CNG	HHD	O2S,ECM,TAA	2.9	0.3	1.3	2.3	2.5	0.03	E7G-350, E7G-325
14	A-118-20	Deere	YJDXH06.8004	239	2400	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0.3	1.9	2.4	2.5	0.04	T06068
15	A-118-19	Deere	YJDXH08.1001	250	2200	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0.4	2.2	2.6		0.05	6081H
16	A-326-13	Power Systems	XPSXH0629E6J	350	1800	DSL	NG	CNG	HHD	ECM,CAC,TC,DI		1.1	7.4	2.4	2.5	0.06	DUAL-FUEL C-10 (10.3L)
17	A-118-18	Deere	YJDXH06.8002	229	2400	DSL	NG	CNG	MHD	ECM,TC,02S		0.48	2.8	3.2		0.07	T06068
19	A-326-12	Power Systems	XPSXH0442E6L	250	2200	DSL	NG	CNG	HHD	ECM		1.2	6	2.2	2.5	0.07	DUAL-FUEL 3126B (7.2L)
21	A-326-15	Power Systems	XPSXH0442E6J	250	2200	DSL	NG	CNG	MHD	ECM,CAC,TC,DI		1.2	6	2.2	2.5	0.08	DUAL-FUEL 3126B (7.2L)
22	A-326-14	Power Systems	XPSXH0729E6J	410	1900	DSL	NG	CNG	HHD	ECM,CAC,TC,DI		0.5	4.1	2.4	2.5	0.102	DUAL-FUEL C-12 (12.0L)
23	A-330-20	Baytech	YBYTH04.3IUV	118	3719	OTT	NG	CNG	HDG	TBI,EGR,OC,HO2S,ECM		0.007	11	1.9			0E418N0500
24	A-330-20	Baytech	YBYTH04.3LEV	122	3899	OTT	NG	CNG	HDG	TBI,EGR,OC,HO2S,ECM		0.015	10.5	2.8			0F717N0500, 0F717E0500, 0F718Q0500, 0F728U0500
25	A-10-911	Ford	YFMXH06.8CF5	305	4250	OTT	GAS	IND	HDG	TWC,SFI,2HO2S,HO2S	0.153		2.49	0.439			OE414Y0505, 0E414N0A05
26	A-10-915	Ford	YFMXH06.8BHF	310	4250	OTT	GAS	IND	HDG	TWC,SFI,2HO2S,HO2S	0.157		2.6	0.407			LB4
27	A-10-920	Ford	YFMXH05.4CF5	255	4500	OTT	GAS	IND	HDG	TWC,SFI,2HO2S,HO2S	0.12		2.24	1.01			LB4
28	A-325-23	GFI	YG9XH06.88CP	310	4250	OTT	GAS	IND	HDG	TWC,2HO2S,SFI	0.1	0.1	2.4	0.5			L31
29	A-325-23	GFI	YG9XH06.88CP	310	4250	OTT	LPG	LPG	HDG	TWC,2HO2S,SFI	0.3	0.3	4.1	1.3			L21
30	A-328-13	IMPCO	YTJXH07.4502	224	3700	OTT	LPG	LPG	HDG	TWC,CARB,EGR,HO2S(2),PCM	0.7	0.6	5.3	1.5			L29
31	A-328-16	IMPCO	YTJXH07.4505	229	3700	OTT	LPG	LPG	HDG	TWC,CARB,EGR,HO2S(2),PCM	0.7		20.6	0.8	1.5		V-10 GFP
32	A-330-10	Baytech	YBYTH05.7ILV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5.9	1.3	1.5		V-10 GFP
33	A-330-12	Baytech	YBYTH05.7LEV	245	4412	OTT	GAS	PH2	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	0.3	0.2	1.5	1.3	1.5		L21
34	A-330-12	Baytech	YBYTH05.7LEV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5.9	1.3	1.5		L21 LPG
35	A-330-14	Baytech	YBYTH05.7050	245	4412	OTT	GAS	PH2	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	0.3	0.2	1.5	1.3			L31-CNG
36	A-330-14	Baytech	YBYTH05.7050	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5.9	1.3			L31-CNG, L31-GASOLINE
37	A-330-8	Baytech	YBYTH05.7ULV	245	4412	OTT	GAS	PH2	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	0.3	0.2	1.5	1.3	1.5		L31-CNG, L31-GASOLINE
38	A-330-8	Baytech	YBYTH05.7ULV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5.9	1.3	1.5		L31-CNG, L31-GASOLINE
39	A-6-941	GM	YGMXH05.7582	255	4600	OTT	GAS	IND	HDG	2TWC,SFI,EGR,2HO2S	0.3		4.9	2.4			L31-CNG, L31-GASOLINE
40	A-6-946	GM	YGMXH07.4502	270	3750	OTT	GAS	IND	HDG	TWC,SFI,EGR,2HO2S	0.6		8.9	1.5			L31-CNG, L31-GASOLINE
41	A-6-947	GM	YGMXH07.4503	290	4000	OTT	GAS	IND	HDG	2TWC,SFI,EGR,2HO2S	0.6		11.1	3.9			L31-CNG, L31-GASOLINE

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Medium-Duty Engines and Incomplete Vehicles
MY2001

ARB Exective Order Data

INCOMPLETE MEDIUM-DUTY VEHICLES									
Vehicle Manufacturer	Engine Mfr	Executive Order	Fuel	Engine Family	Liter Disp	CID	HP	Emis Std	MODELS
GFI	GFI	A-325-30	LPG or Gaso	1G9XH06.87CP	6.8	417	310	ULEV	F-350 (Ford evaporative control system)
	GFI	A-325-29	LPG or Gaso	1G9XH06.87CP	6.8	417	310	ULEV	V 10 GFP (Torque 425)
Ford	Ford	A-10-987	Gasoline	1FMXH06.8TH5	6.8	417	310	ULEV	E-350: Commercial Cutaway, RV Cutaway, Commercial Stripped Chassis. E-Super Duty Cutaway. F-350 Reg Cab Sub Cab, Crew Cab.
Ford	Ford	A-10-992	Gasoline	1FMXH05.4TH5	5.4	326	255	ULEV	E-Series, E-350. F-Series F-250HD, F-350

MEDIUM-DUTY ENGINES								
Engine Mfr	Executive Order	Fuel	Engine Family	Liter Disp	CID	HP	Emis Std	MODELS
Ford	A-10-986	Gasoline	1FMXH06.8TH5	6.8	417	310	ULEV	E series, F Series
Ford	A-10-991	Gasoline	1FMXH05.4TH5	5.4	326	255	ULEV	E series, F Series

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Medium-Duty Vehicles
MY2000

sorted by Mfr.

	A	B	C	D	E	F	G	H	I
1	MFR	ARB Exec Order	Engine Family	VEH CLS	EXH STD	EXH FUEL TYPE	EXH CERT FUEL	ECS TYPE	MODELS
2	CHRY	A-9-469	YCRXT05.26RC	M3	SULEV	DED	CNG	TWC,OC,SFI,2HO2S	CHRYSLER
3	FORD	A-10-907	YFMXT05.4RP5	M3	SULEV	DED	CNG	2TWC(2),TWC,2HO2S,SFI	FORD
4	FORD	A-10-908	YFMXT05.4RP6	M3	SULEV	DED	CNG	2TWC,TWC,2HO2S,SFI	FORD
5	CHRY	A-9-461	YCRXA0287H41	M2	ULEV	DED	PH2	2HO2S(2),2WUOC,SFI,TWC	DODGE
6	GM	A-6-911	YGMXA04.3189	M2	ULEV	DED	PH2	SFI,EGR,TWC,2HO2S(2),HO2S, WU-TWC	CHEVROLET, GMC

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Heavy-Duty Engines and Incomplete Vehicles
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ARB Executive Order Data

INCOMPLETE HEAVY-DUTY VEHICLES

Vehicle Mfr	Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
IMPCO	IMPCO	A-328-19-1	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	GMC/Chevrolet C6500, C7500, C8500, B7500
IMPCO	IMPCO	A-328-21	LPG	HDG2	1TJXH08.1505	8.1	496	276	395	GMC/Chevrolet C6500, C7500, C8500, B7500
GFI	GFI	A-325-32	LPG or Gaso	HDG2	1G9XH06.88CP	6.8	417	310	425	F-450, F-550

HEAVY-DUTY ENGINES

Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
Deere	A-108-22	CNG	Urban Bus	1JDXH08.1001	8.1	497	280	900	6081H
IMPCO	A-328-18	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	L19LPG
IMPCO	A-328-20	LPG	HDG2	1TJXH08.1505	8.1	496	276	395	L18LPG

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T
1	ARB Executive Order	Manufacturer	Engine Family	Max BHP	MAX RPM	CERT Type	Fuel Type	CERT FUEL	Service Class	ECS_TYPE	THC	NMHC	CO	NOx	Opt NOx Std	PM	MODELS
3	A-21-280-1	Cummins	YCEXH0505CBJ	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0.2	0.6	1.7	2.5	0.01	C8.3-275G
4	A-21-285	Cummins	YCEXH0359BBL	195	2600	DSL	NG	LPG	BUS	PCM,TC,CAC,OC,HO2S	0.8		1	2.3	2.5	0.01	B5.9-195 LPG
5	A-290-83	DDC	YDDXH08.5FJG	275	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0.8	2.2	1.5	2.0	0.01	CNG, LNG SERIES 50G
6	A-290-85	DDC	YDDXH08.5FJF	275	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0.8	2.2	1.5		0.01	CNG, LNG SERIES 50G
7	A-118-21	Deere	YJDXH08.1003	254	2200	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0.4	1.8	2.2	2.5	0.02	6081H
8	A-21-283	Cummins	YCEXH0505CBI	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0.6	0.9	1.837	2.5	0.02	C8.3-275G, C8.3-250G
9	A-21-284	Cummins	YCEXH0359BBK	230	2600	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0.06	2.7	1.83	2.5	0.02	B5.9-230G, B5.9-195, B5.9-150G
10	A-290-81	DDC	YDDXH12.7FGF	330	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0.8	2	2		0.02	CNG, LNG SERIES 60G
11	A-290-84	DDC	YDDXH12.7FGG	330	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0.8	2	2	2.5	0.02	CNG, LNG SERIES 60G
12	A-290-87	DDC	YDDXH12.7FGF	330	2100	DSL	NG	CNG	BUS	ECM		0.8	2	2		0.02	CNG, LPG SERIES 60G
14	A-118-20	Deere	YJDXH06.8004	239	2400	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0.3	1.9	2.4	2.5	0.04	T06068
15	A-118-19	Deere	YJDXH08.1001	250	2200	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0.4	2.2	2.6		0.05	6081H
17	A-118-18	Deere	YJDXH06.8002	229	2400	DSL	NG	CNG	MHD	ECM,TC,02S		0.48	2.8	3.2		0.07	T06068
18	A-21-287	Cummins	YCEXH0505CBG	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,HO2S		1.1	7.1	2.19		0.07	C8.3-275G, C8.3-250G
20	A-21-286	Cummins	YCEXH0359BBJ	230	2600	DSL	NG	CNG	BUS	PCM,TC,CAC,HO2S	0.1		7.2	2.72		0.08	B5.9-230G, B5.9-195G, B5.9-150G
21	A-326-15	Power Systems	XPSXH0442E6J	250	2200	DSL	NG	CNG	MHD	ECM,CAC,TC,DI		1.2	6	2.2	2.5	0.08	DUAL-FUEL 3126B (7.2L)
23	A-330-20	Baytech	YBYTH04.3IUV	118	3719	OTT	NG	CNG	HDG	TBI,EGR,OC,HO2S,ECM		0.007	11	1.9			0E418N0500
24	A-330-20	Baytech	YBYTH04.3LEV	122	3899	OTT	NG	CNG	HDG	TBI,EGR,OC,HO2S,ECM		0.015	10.5	2.8			0F717N0500, 0F717E0500, 0F718Q0500, 0F728U0500
29	A-325-23	GFI	YG9XH08.88CP	310	4250	OTT	LPG	LPG	HDG	TWC,2HO2S,SFI	0.3	0.3	4.1	1.3			L21
30	A-328-13	IMPCO	YTJXH07.4502	224	3700	OTT	LPG	LPG	HDG	TWC,CARB,EGR,HO2S(2),PCM	0.7	0.6	5.3	1.5			L29
31	A-328-16	IMPCO	YTJXH07.4505	229	3700	OTT	LPG	LPG	HDG	TWC,CARB,EGR,HO2S(2),PCM	0.7		20.6	0.8	1.5		V-10 GFP
32	A-330-10	Baytech	YBYTH05.7ILV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5.9	1.3	1.5		V-10 GFP
34	A-330-12	Baytech	YBYTH05.7LEV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5.9	1.3	1.5		L21 LPG
35	A-330-14	Baytech	YBYTH05.7050	245	4412	OTT	GAS	PH2	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	0.3	0.2	1.5	1.3			L31-CNG
36	A-330-14	Baytech	YBYTH05.7050	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5.9	1.3			L31-CNG, L31-GASOLINE
37	A-330-8	Baytech	YBYTH05.7ULV	245	4412	OTT	GAS	PH2	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	0.3	0.2	1.5	1.3	1.5		L31-CNG, L31-GASOLINE
38	A-330-8	Baytech	YBYTH05.7ULV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5.9	1.3	1.5		L31-CNG, L31-GASOLINE
39	A-6-941	GM	YGMXH05.7582	255	4600	OTT	GAS	IND	HDG	2TWC,SFI,EGR,2HO2S	0.3		4.9	2.4			L31-CNG, L31-GASOLINE
40	A-6-946	GM	YGMXH07.4502	270	3750	OTT	GAS	IND	HDG	TWC,SFI,EGR,2HO2S	0.6		8.9	1.5			L31-CNG, L31-GASOLINE
41	A-6-947	GM	YGMXH07.4503	290	4000	OTT	GAS	IND	HDG	2TWC,SFI,EGR,2HO2S	0.6		11.1	3.9			L31-CNG, L31-GASOLINE

AQMD Rule 1186.1 Compliant

Heavy-Duty Engines and Incomplete Vehicles
MY2001

ARB Executive Order Data

INCOMPLETE HEAVY-DUTY VEHICLES

Vehicle Mfr	Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
IMPCO	IMPCO	A-328-19	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	GMC/Chevrolet C6500, C7500, C8500, B7500
IMPCO	IMPCO	A-328-19-1	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	GMC/Chevrolet C6500, C7500, C8500, B7500
IMPCO	IMPCO	A-328-21	LPG	HDG2	1TJXH08.1505	8.1	496	276	395	GMC/Chevrolet C6500, C7500, C8500, B7500
GFI	GFI	A-325-32	LPG or Gaso	HDG2	1G9XH06.88CP	6.8	417	310	425	F-450, F-550

HEAVY-DUTY ENGINES

Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
IMPCO	A-328-18	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	L19LPG
IMPCO	A-328-20	LPG	HDG2	1TJXH08.1505	8.1	496	276	395	L18LPG

AQMD Rule 1186.1 Compliant

Heavy-Duty Engines
MY2000

sorted by PM

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T
1	ARB Executive Order	Manufacturer	Engine Family	Max BHP	MAX RPM	CERT Type	Fuel Type	CERT FUEL	Service Class	EC3_TYPE	THC	NMHC	CO	NOx	Opt NOx Std	PM	MODELS
7	A-118-21	Deere	YJDXH08.1003	254	2200	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0 4	1 8	2 2	2 5	0 02	6081H
14	A-118-20	Deere	YJDXH06.8004	239	2400	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0 3	1 9	2 4	2 5	0.04	T06068
15	A-118-19	Deere	YJDXH08.1001	250	2200	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0 4	2 2	2 8		0 05	6081H
17	A-118-18	Deere	YJDXH06.8002	229	2400	DSL	NG	CNG	MHD	ECM,TC,02S		0 48	2 8	3 2		0 07	T06068
21	A-326-15	Power Systems	XPSXH0442E6J	250	2200	DSL	NG	CNG	MHD	ECM,CAC,TC,DI		1 2	6	2 2	2 5	0 08	DUAL-FUEL 3126B (7.2L)
23	A-330-20	Baytech	YBYTH04.3IUV	118	3719	OTT	NG	CNG	HDG	TBI,EGR,OC,HO2S,ECM		0 007	11	1 9			0E418N0500
24	A-330-20	Baytech	YBYTH04.3LEV	122	3899	OTT	NG	CNG	HDG	TBI,EGR,OC,HO2S,ECM		0 015	10 5	2 8			0F717N0500, 0F717E0500, 0F718Q0500, 0F728U0500
29	A-325-23	GFI	YG9XH06.88CP	310	4250	OTT	LPG	LPG	HDG	TWC,2HO2S,SFI	0 3	0 3	4 1	1 3			L21
30	A-328-13	IMPCO	YTJXH07.4502	224	3700	OTT	LPG	LPG	HDG	TWC,CARB,EGR,HO2S(2),PCM	0 7	0 6	5 3	1 5			L29
31	A-328-16	IMPCO	YTJXH07.4505	229	3700	OTT	LPG	LPG	HDG	TWC,CARB,EGR,HO2S(2),PCM	0 7		20 6	0 8	1 5		V-10 GFP
32	A-330-10	Baytech	YBYTH05.7ILV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1 4	0	5 9	1 3	1 5		V-10 GFP
34	A-330-12	Baytech	YBYTH05.7LEV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1 4	0	5 9	1 3	1 5		L21 LPG
36	A-330-14	Baytech	YBYTH05.7050	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1 4	0	5 9	1 3			L31-CNG, L31-GASOLINE
38	A-330-8	Baytech	YBYTH05.7ULV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1 4	0	5 9	1 3	1 5		L31-CNG, L31-GASOLINE

Received 5/5/2000

AQMD Rule 1196 Compliant

Heavy-Duty Engines and Incomplete Vehicles
MY2001

ARB Executive Order Data

INCOMPLETE HEAVY-DUTY VEHICLES

Vehicle Mfr	Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
Mack	Mack	A-27-82	CNG/LNG	HHD	1MKXH11.9G58	11.9	787	325	1050	MR, LE, CH
IMPCO	IMPCO	A-328-19	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	GMC/Chevrolet C6500, C7500, C8500, B7500
IMPCO	IMPCO	A-328-19-1	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	GMC/Chevrolet C6500, C7500, C8500, B7500
IMPCO	IMPCO	A-328-21	LPG	HDG2	1TJXH08.1505	8.1	496	276	395	GMC/Chevrolet C6500, C7500, C8500, B7500
GFI	GFI	A-325-32	LPG or Gaso	HDG2	1G9XH06.88CP	6.8	417	310	425	F-450, F-550
Ford	Ford	A-10-983	Gasoline	HDG2	1FMXH06.8CH5	6.8	417	305	425	F-450, F-550
Ford	Ford	A-10-985	Gasoline	HDG2	1FMXH06.8CF5	6.8	417	305	420	E-Series, E-350, E-450
Ford	Ford	A-10-990	Gasoline	HDG2	1FMXH05.4CF5	5.4	326	255	350	E-Series, E-350
GM	GM	A-6-979	Gasoline	HDG2	1GMXH08.1513	8.1	496	340	455	CK30
GM	GM	A-6-1004	Gasoline	HDG2	1GMXH08.1512	8.1	496	270	400	B7, C6, C7
GM	GM	A-6-1008	Gasoline	HDG2	1GMXH08.1502	8.1	496	270	400	B7, C6, C7

HEAVY-DUTY ENGINES

Engine Mfr	Exec Order	Fuel	Vehicle Class	Engine Family	Liter Disp	CID	Max HP	Torq	MODELS
Mack	A-27-81	CNG/LNG	HHD	1MKXH11.9G58	11.9	787	325	1050	E7G325
Deere	A-108-22	CNG	Urban Bus	1JDXH08.1001	8.1	497	280	900	6081H
IMPCO	A-328-18	LPG	HDG2	1TJXH08.1502	8.1	496	276	395	L19LPG
IMPCO	A-328-20	LPG	HDG2	1TJXH08.1505	8.1	496	276	395	L18LPG
Ford	A-10-982	Gasoline	HDG2	1FMXH06.8CH5	6.8	417	310	425	F-Series
Ford	A-10-984	Gasoline	HDG2	1FMXH06.8CF5	6.8	417	305	420	E-Series
Ford	A-10-989	Gasoline	HDG2	1FMXH05.4CF5	5.4	326	255	350	E-Series
GFI	A-325-31	Gasoline	HDG2	1G9XH06.88CP	6.8	417	310	425	V-10 GFP
GM	A-6-997	Gasoline	HDG2	1GMXH05.7582	5.7	350	250	330	L31
GM	A-6-1001	Gasoline	HDG2	1GMXH08.1502	8.1	496	270	400	L18
GM	A-6-1002	Gasoline	HDG2	1GMXH08.1503	8.1	496	340	455	L18
GM	A-6-1003	Gasoline	HDG2	1GMXH08.1512	8.1	496	270	400	L18
GM	A-6-1009	Gasoline	HDG2	1GMXH08.1503	8.1	496	340	455	CK30, P30
GM	A-6-1016	Gasoline	HDG2	1GMXH08.1513	8.1	496	340	455	L18

AQMD Rule 1196 Compliant

Heavy-Duty Engines
MY2000

sorted by PM

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T
1	ARB Executive Order	Manufacturer	Engine Family	Max BHP	MAX RPM	CERT Type	Fuel Type	CERT FUEL	Service Class	ECS_TYPE	THC	NMHC	CO	NOx	Opt NOx Std	PM	MODELS
3	A-21-280-1	Cummins	YCEXH0505CBJ	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0 2	0 6	1 7	2 5	0.01	C8.3-275G
4	A-21-285	Cummins	YCEXH0359BBL	195	2800	DSL	NG	LPG	BUS	PCM,TC,CAC,OC,HO2S	0 8		1	2 3	2 5	0.01	B5.9-195 LPG
5	A-290-83	DDC	YDDXH08.5FJG	275	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0 8	2 2	1 5	2 0	0.01	CNG, LNG SERIES 50G
6	A-290-85	DDC	YDDXH08.5FJF	275	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0 8	2 2	1 5		0.01	CNG, LNG SERIES 50G
7	A-118-21	Deere	YJDXH08.1003	254	2200	DSL	NG	CNG	MHD	ECM,TC,CAC,02S		0 4	1 8	2 2	2 5	0.02	6081H
8	A-21-283	Cummins	YCEXH0505CBI	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0 6	0 9	1 837	2 5	0.02	C8.3-275G, C8.3-250G
9	A-21-284	Cummins	YCEXH0359BBK	230	2800	DSL	NG	CNG	BUS	PCM,TC,CAC,OC,HO2S		0 06	2 7	1 83	2 5	0.02	B5.9-230G, B5.9-195, B5.9-150G
10	A-290-81	DDC	YDDXH12.7FGF	330	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0 8	2	2		0.02	CNG, LNG SERIES 60G
11	A-290-84	DDC	YDDXH12.7FGG	330	2100	DSL	NG	CNG	BUS	TC,ECM,CAC		0 8	2	2	2 5	0.02	CNG, LNG SERIES 60G
12	A-290-87	DDC	YDDXH12.7FGF	330	2100	DSL	NG	CNG	BUS	ECM		0 8	2	2		0.02	CNG, LPG SERIES 60G
13	A-27-77	Mack	YMKXH11.9G55	350	1800	DSL	NG	CNG	HHD	O2S,ECM,TAA	2 9	0 3	1 3	2 3	2 5	0.03	E7G-350, E7G-325
14	A-118-20	Deere	YJDXH06.8004	239	2400	DSL	NG	CNG	MHD	ECM,TC,CAC,C2S		0 3	1 9	2 4	2 5	0.04	T06068
15	A-118-19	Deere	YJDXH08.1001	250	2200	DSL	NG	CNG	MHD	ECM,TC,CAC,C2S		0 4	2 2	2 6		0.05	6081H
16	A-326-13	Power Systems	XPSXH0629E6J	350	1800	DSL	NG	CNG	HHD	ECM,CAC,TC,DI		1 1	7 4	2 4	2 5	0.06	DUAL-FUEL C-10 (10.3L)
17	A-118-18	Deere	YJDXH06.8002	229	2400	DSL	NG	CNG	MHD	ECM,TC,02S		0 48	2 8	3 2		0.07	T06068
18	A-21-287	Cummins	YCEXH0505CBG	275	2400	DSL	NG	CNG	BUS	PCM,TC,CAC,HO2S		1 1	7 1	2 19		0.07	C8.3-275G, C8.3-250G
19	A-326-12	Power Systems	XPSXH0442E6L	250	2200	DSL	NG	CNG	HHD	ECM		1 2	6	2 2	2 5	0.07	DUAL-FUEL 3126B (7.2L)
20	A-21-286	Cummins	YCEXH0359BBJ	230	2800	DSL	NG	CNG	BUS	PCM,TC,CAC,HO2S	0 1		7 2	2 72		0.08	B5.9-230G, B5.9-195G, B5.9-150G
21	A-326-15	Power Systems	XPSXH0442E6J	250	2200	DSL	NG	CNG	MHD	ECM,CAC,TC,DI		1 2	6	2 2	2 5	0.08	DUAL-FUEL 3126B (7.2L)
22	A-326-14	Power Systems	XPSXH0729E6J	410	1900	DSL	NG	CNG	HHD	ECM,CAC,TC,DI		0 5	4 1	2 4	2 5	0.102	DUAL-FUEL C-12 (12.0L)
23	A-330-20	Baytech	YBYTH04.3IUV	118	3719	OTT	NG	CNG	HDG	TBI,EGR,OC,HO2S,ECM		0 007	11	1 9			0E418N0500
24	A-330-20	Baytech	YBYTH04.3LEV	122	3899	OTT	NG	CNG	HDG	TBI,EGR,OC,HO2S,ECM		0 015	10 5	2 8			0F717N0500, 0F717E0500, 0F718Q0500, 0F728U0500
25	A-10-911	Ford	YFMXH06.8CF5	305	4250	OTT	GAS	IND	HDG	TWC,SFI,2HO2S,HO2S	0 153		2 49	0 439			OE414Y0505, 0E414N0A05
26	A-10-915	Ford	YFMXH06.8BHF	310	4250	OTT	GAS	IND	HDG	TWC,SFI,2HO2S,HO2S	0 157		2 6	0 407			LB4
27	A-10-920	Ford	YFMXH05.4CF5	255	4500	OTT	GAS	IND	HDG	TWC,SFI,2HO2S,HO2S	0 12		2 24	1 01			LB4
28	A-325-23	GFI	YG9XH06.88CP	310	4250	OTT	GAS	IND	HDG	TWC,2HO2S,SFI	0 1	0 1	2 4	0 5			L31
29	A-325-23	GFI	YG9XH06.88CP	310	4250	OTT	LPG	LPG	HDG	TWC,2HO2S,SFI	0 3	0 3	4 1	1 3			L21
30	A-328-13	IMPCO	YTJXH07.4502	224	3700	OTT	LPG	LPG	HDG	TWC,CARB,EGR,HO2S(2),PCM	0 7	0 6	5 3	1 5			L29
31	A-328-16	IMPCO	YTJXH07.4505	229	3700	OTT	LPG	LPG	HDG	TWC,CARB,EGR,HO2S(2),PCM	0 7		20 6	0 6	1 5		V-10 GFP
32	A-330-10	Baytech	YBYTH05.7ILV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5 9	1 3	1 5		V-10 GFP
33	A-330-12	Baytech	YBYTH05.7LEV	245	4412	OTT	GAS	PH2	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	0.3	0 2	1 5	1 3	1 5		L21
34	A-330-12	Baytech	YBYTH05.7LEV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5 9	1 3	1 5		L21 LPG
35	A-330-14	Baytech	YBYTH05.7050	245	4412	OTT	GAS	PH2	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	0.3	0 2	1 5	1 3			L31-CNG
36	A-330-14	Baytech	YBYTH05.7050	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5 9	1 3			L31-CNG, L31-GASOLINE
37	A-330-8	Baytech	YBYTH05.7ULV	245	4412	OTT	GAS	PH2	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	0.3	0 2	1 5	1 3	1 5		L31-CNG, L31-GASOLINE
38	A-330-8	Baytech	YBYTH05.7ULV	211	4476	OTT	NG	CNG	HDG	EGR,2TWC,2HO2S(2),TBI,ECM,SFI	1.4	0	5 9	1 3	1 5		L31-CNG, L31-GASOLINE
39	A-8-941	GM	YGMXH05.7582	255	4600	OTT	GAS	IND	HDG	2TWC,SFI,EGR,2HO2S	0.3		4 9	2 4			L31-CNG, L31-GASOLINE
40	A-8-946	GM	YGMXH07.4502	270	3750	OTT	GAS	IND	HDG	TWC,SFI,EGR,2HO2S	0.6		8 9	1 5			L31-CNG, L31-GASOLINE
41	A-8-947	GM	YGMXH07.4503	290	4000	OTT	GAS	IND	HDG	2TWC,SFI,EGR,2HO2S	0 6		11 1	3 9			L31-CNG, L31-GASOLINE

Received 5/5/2000

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UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA,
WESTERN DIVISION

ENGINE MANUFACTURERS ASSOCIATION,

Plaintiff,

vs.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al.,

Defendants.

NATURAL RESOURCES DEFENSE COUNCIL, INC.; COALITION FOR CLEAN AIR, INC.; COMMUNITIES FOR A BETTER ENVIRONMENT, INC.; PLANNING AND CONSERVATION LEAGUE; and SIERRA CLUB,

Defendants-in-Intervention.

WESTERN STATES PETROLEUM ASSOCIATION,

Plaintiff-in-Intervention.

CASE NO. 00-09065 FMC (BQRx)

DECLARATION OF DAVID R. COEL IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT BY DEFENDANT SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

[FRCP 56(b)]

Date: May 21, 2001
Time: 10:00 a.m.
Courtroom: 750

1. The following matters are within my personal knowledge. I would testify as follows if called on to do so.

2. I am Program Supervisor in the Fleet Rules Implementation Unit of the South Coast Air Quality Management District. My principal job duty is to provide technical information for use in rule development

and implementation of the District's Fleet Rules. I have [sic] Bachelor of Science degree in Chemical Engineering from California Polytechnic State University, Pomona. I am a registered Professional Engineer in the State of California.

3. As part of my work on the Fleet Rules, I have researched specific vehicles and engines that are available for fleet operators to use to comply with the Fleet Rules. Since the fall of 1999, I have had numerous discussions with vehicle and engine manufactures and officials with the California Air Resources Board regarding the availability of complaint vehicles. Also, I have obtained written product information regarding compliant vehicles from engine manufacturers and state regulatory officials. Finally, I have conducted numerous conversations, by telephone and in person, with vehicle operators regarding the vehicles [sic] are likely to purchase to comply with the Fleet Rules.

4. I have reviewed the list of member companies of the Engine Manufacturers Association listed on the EMA website at www.engine-manufacturers.org/about/members.cfn. A true and correct copy of the webpage with the listing of EMA members is attached hereto as Exhibit "A."

5. Based on my research conducted during development of the fleet rules, it is my opinion that for the medium and heavy duty vehicle classes, the vehicles and engines that are available for fleet operators to purchase to comply with the Fleet Rules, and that fleet operators are likely to purchase to comply with the Fleet Rules, are manufactured by EMA member companies.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 18th day of April, 2001, at Diamond Bar, California.

/s/ David R. Coel
David R. Coel, Declarant

EXHIBIT TO DECLARATION OF DAVID R. COEL

Engine Manufacturers Association

Member Companies

HOME
About EMA
Recommended Guidelines
Newsroom
Members Only
EMA Internet Resources

Briggs & Stratton Corporation
Caterpillar, Inc.
Cummins Engine Company
DaimlerChrysler Corporation
DaimlerChrysler AG Power Train Business Unit
Deere & Company
Detroit Diesel Corporation
Deutz Corporation
Ford Motor Corporation
General Electric Company
General Motors Corporation
Hino Motors, Ltd.
International Truck and Engine Corporation
Isuzu Motors America, Inc.
Kohler Company
Komatsu Ltd.
Kubota Tractor Corporation
Mack Trucks, Inc.
MerCruiser

Mitsubishi Engine North America, Inc.
Mitsubishi Fuso Truck of America, Inc.
New Holland North America, Inc.
Onan Corporation
Robin America, Inc.
Scania CV AB
Tecumseh Products Company
Volkswagen of America, Inc.
Volvo Truck Corporation
Waukesha Engine Division
Yamaha Motor Corporation
Yanmar Diesel America Corporation

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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENGINE MANUFACTURERS ASSOCIATION, Plaintiff, v. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ("SCAQMD"), et al., Defendants.	)	Case No. 00-09065 FMC (BQRX) The following two items were entered as exhibits in this court.
NATURAL RESOURCES DEFENSE COUNCIL, INC., COALITION FOR CLEAN AIR, INC., COMMUNITIES FOR A BETTER ENVIRONMENT, INC., PLANNING AND CONSERVATION LEAGUE, and SIERRA CLUB, Intervenors.	)	
WESTERN STATES PETROLEUM ASSOCIATION, Intervenor.	)	

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

FINAL PROGRAM ENVIRONMENTAL ASSESSMENT FOR:

PROPOSED FLEET VEHICLE RULES AND RELATED RULE AMENDMENTS

June 5, 2000

SCAQMD No. 000307DWS

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Barbara Baird – District Counsel

* * *

CHAPTER 3

EXISTING SETTING

Introduction

Air Quality

Water Resources

Transportation / Circulation

Public Services

Solid / Hazardous Waste

Energy / Mineral Resources

Hazards

INTRODUCTION

In order to determine the significance of the impacts associated with a proposed project, it is necessary to evaluate the project's impacts against the backdrop of the environment as it exists at the time the NOP/IS is published. The CEQA Guidelines defines "environment" as "the physical conditions that exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance" (CEQA Guidelines §15360; see also Public Resources Code §21060.5). Furthermore, a CEQA document must include a description of the physical environment in the vicinity of the project, as it exists at the time the notice of preparation is published,

from both a local and regional perspective (CEQA Guidelines §15125). Therefore, the "environment" or "existing setting" against which a project's impacts are compared consists of the immediate, contemporaneous physical conditions at and around the project site (Remy, et al; 1996).

The following sections set forth the existing setting for each environmental topic analyzed in this report, i.e., air quality, water resources, transportation/circulation, public services, solid/hazardous waste, energy/mineral resources, and hazards. In Chapter 4, potential adverse impacts from these identified environmental areas are then compared to the existing setting to determined [sic] whether the effects of the implementation of the proposed fleet vehicle rules are significant.

AIR QUALITY

It is the responsibility of the SCAQMD to ensure that state and federal ambient air quality standards are achieved and maintained. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than 10 microns (PM 10), sulfur dioxide (SO_2) and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards and in the case of PM 10 and SO_2, far more stringent. California has also established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each

of these pollutants and their effects on health are summarized in Table 3-1.

The SCAQMD monitors levels of various criteria pollutants at 33 monitoring stations. In 1998, the area within the SCAQMD's jurisdiction exceeded the federal standards for ozone, carbon monoxide, or PM 10 on a total of 97 days. In 1998, the annual maximum concentrations of ozone and CO in the district exceeded both federal and state standards in some or all areas. For PM 10, only the state standard was exceeded in some or all areas with in the district. In 1998, no areas of the Basin exceeded standards for NO_x, SO_2, lead, or sulfate. Currently, the district is in attainment with the ambient air quality standards for lead and SO_2 and NO_2. The 1998 air quality data from SCAQMD's monitoring stations are presented in Table 3-2.

Ozone

Unlike primary criteria pollutants that are emitted directly from an emissions source, ozone is a secondary pollutant. It is formed in the atmosphere through a photochemical reaction of VOC, NOx, oxygen, and other hydrocarbon materials with sunlight.

Ozone is a deep lung irritant, causing the passages to become inflamed and swollen. Exposure to ozone produces alterations in respiration, the most characteristic of which is shallow, rapid breathing and a decrease in pulmonary performance. Ozone reduces the respiratory system's ability to fight infection and to remove foreign particles. People who suffer from respiratory diseases such as asthma, emphysema, and chronic bronchitis are more sensitive to ozone's effects. In severe cases, ozone is capable of causing death from pulmonary edema. Early studies

suggested that long-term exposure to ozone results in adverse effects on morphology and function of the lung and acceleration of lung-tumor formation and aging. Ozone exposure also increases the sensitivity of the lung to bronchoconstrictive agents such as histamine, acetylcholine, and allergens.

The national ozone ambient air quality standard is exceeded far more frequently in the SCAQMD's jurisdiction than any other area in the United States[1]. In the past few years, ozone air quality has been the cleanest on record in terms of maximum concentration and number of days exceeding the standards and episode levels. Maximum 1-hour average and 8-hour average ozone concentrations in 1998 (0.24 ppm and 0.21 ppm) were 200 percent and 263 percent of the federal 1-hour and 8-hour standards, respectively. Ozone concentrations exceeded the 1-hour state standard at all but two monitored locations in 1998.

The 1-hour federal ozone standard was exceeded a number of days in different areas of the Basin in 1998. The number of days exceeding the federal standard varies widely between different areas of the Basin. The standard was exceeded most frequently in the Basin's inland valleys in an area extending from the East San Gabriel Valley eastward to the Riverside-San Bernardino area and into the adjacent mountains. The Central San Bernardino Valley recorded the greatest number of exceedances of the national ozone standard (57 days).

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[1] It should be noted that in 1999 Houston, Texas exceeded the federal ozone standards on several occasions and reported the highest ozone concentration in the nation.

* * *

In 1997, the USEPA promulgated a new national ambient air quality standard for ozone. However, a recent court decision has ordered that the USEPA cannot enforce the new standard until USEPA provides adequate justification for the new standard. USEPA is in the process of appealing the decision. Meanwhile, CARB and local air districts continue to collect technical information in order to prepare for an eventual SIP to reduce unhealthful levels of ozone in areas violating the new federal standard. California has previously developed a SIP for the current ozone standard.

Carbon Monoxide

CO is a colorless, odorless gas formed by the incomplete combustion of fuels. CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs in the body. The ambient air quality standard for carbon monoxide is intended to protect persons whose medical condition already compromises their circulatory systems' ability to deliver oxygen. These medical conditions include certain heart ailments, chronic lung diseases, and anemia. Persons with these conditions have reduced exercise capacity even when exposed to relatively low levels of CO. Fetuses are at risk because their blood has an even greater affinity to bind with CO. Smokers are also at risk from ambient CO levels because smoking increases the background level of CO in their blood.

CO was monitored at 21 locations in the district in 1998. The national and state 8-hour CO standards were exceeded at two and four locations, respectively. The highest

8-hour average CO concentration of the year (13.5 ppm) was 179 percent of the federal standard. Source/Receptor Area No. 12, South Central Los Angeles County, reported by far the greatest number of the exceedances of the federal and state CO standards (10 and 11 days, respectively) in 1998.

Nitrogen Dioxide

NO_2 is a brownish gas that is formed in the atmosphere through a rapid reaction of the colorless gas nitric oxide (NO) with atmospheric oxygen. NO and NO_2 are collectively referred to as NO_x. NO_2 can cause health effects in sensitive population groups such as children and people with chronic lung diseases. It can cause respiratory irritation and constriction of the airways, making breathing more difficult. Asthmatics are especially sensitive to these effects. People with asthma and chronic bronchitis may also experience headaches, wheezing and chest tightness at high ambient levels of NO_2. NO_2 is suspected to reduce resistance to infection, especially in young children.

By 1991, exceedances of the federal standard were limited to one location in Los Angeles County. The Basin was the only area in the United States classified as nonattainment for the federal NO_2 standard under the 1990 Clean Air Act Amendments. No location in the area of SCAQMD's jurisdiction has exceeded the federal standard since 1992 and the South Coast Air Basin was designated attainment for the national standard in 1998. The state NO_2 standard has been met each year since 1994. In 1998, the maximum annual arithmetic mean (0.0433ppm) was 81 percent of the federal standard (the federal standard is annual

arithmetic mean NO_2 greater than 0.0534 ppm.). The more stringent state standard was exceeded on one day, with a maximum 1-hour average NO_2 concentration (0.26 ppm) which was 104 percent of the state standard (0.25 ppm). In 1998, the South Coast Air Basin was redesignated to attainment of the federal NO_2 ambient air quality standard. Despite declining NO_x emissions over the last decade, further NO_x emissions reductions are necessary because NO_x emissions are PM 10 and ozone precursors.

Particulate Matter (PM 10)

PM 10 is defined as suspended particulate matter 10 microns or less in diameter and includes a complex mixture of man-made and natural substances including sulfates, nitrates, metals, elemental carbon, sea salt, soil, organics and other materials. PM 10 may have adverse health impacts because these microscopic particles are able to penetrate deeply into the respiratory system. In some cases, the particulates themselves may cause actual damage to the alveoli of the lungs or they may contain adsorbed substances that are injurious. Children can experience a decline in lung function and an increase in respiratory symptoms from PM 10 exposure. People with influenza, chronic respiratory disease and cardiovascular disease can be at risk of aggravated illness from exposure to fine particles. Increases in death rates have been statistically linked to corresponding increases in PM 10 levels.

In 1998, PM 10 was monitored at 20 locations in the district. There were no exceedances of the federal 24-hour standard (150 $\mu g/m^3$), while the state 24-hour standard (50 $\mu g/m^3$) was exceeded at all 20 locations. The federal

standard (annual arithmetic mean greater than 50 $\mu g/m^3$) was exceeded in two locations, and the state standard (annual geometric mean greater than 30 $\mu g/m^3$) was exceeded at 13 locations.

In 1997, the USEPA promulgated a new national ambient air quality standard for PM2.5, particulate matter 2.5 microns or less in diameter. The PM2.5 standard complements existing national and state ambient air quality standards that target the full range of inhalable PM 10. However, a recent court decision has ordered that the USEPA cannot enforce the new standard until USEPA provides adequate justification for the new standard. USEPA is in the process of appealing the decision. Meanwhile, CARB and local air districts continue to collect technical information in order to prepare for an eventual SIP to reduce unhealthful levels of PM2.5 in areas violating the new federal standard. California has previously developed a SIP for the current PM 10 standard.

Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. Though SO_2 concentrations have been reduced to levels well below state and federal standards, further reductions in emissions of SO_2 are needed to comply with standards for other pollutants (sulfate and PM 10).

Lead

Lead concentrations once exceeded the state and national ambient air quality standards by a wide margin, but have not exceeded state or federal standards at any regular monitoring station since 1982. Though special monitoring sites immediately downwind of lead sources recorded very localized violations of the state standard in 1994, no violations were recorded at these stations since that time.

Sulfates

Sulfates are a group of chemical compounds containing the sulfate group, which is a sulfur atom with four oxygen atoms attached. Though not exceeded in 1993, 1996, 1997, and 1998 the state sulfate standard was exceeded at three locations in 1994 and one location in 1995. There are no federal air quality standards for sulfate.

Visibility

Since deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the public's perception of air quality, the state of California has adopted a standard for visibility or visual range. Until 1989, the standard was based on visibility estimates made by human observers. The standard was changed to require measurement of visual range using instruments that measure light scattering and absorption by suspended particles. It has been determined that the calibration of the instruments used to measure visibility was faulty, and no reliable data are available for 1998.

Volatile Organic Compounds

It should be noted that there are no state or national ambient air quality standards for VOCs because they are not classified as criteria pollutants. VOCs are regulated, however, because reduction in VOC emissions reduces the rate of photochemical reactions that contribute to the formation of ozone. They are also transformed into organic aerosols in the atmosphere, contributing to higher PM 10 and lower visibility levels.

Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOCs because of interference with oxygen uptake. In general, ambient VOC concentrations in the atmosphere are suspected to cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis, even at low concentrations. Some hydrocarbon components classified as VOC emissions are thought or known to be hazardous. Benzene, for example, one hydrocarbon component of VOC emissions, is known to be a human carcinogen.

Non-Criteria Pollutant Emissions

Although the SCAQMD's primary mandate is attaining the State and National Ambient Air Quality Standards for criteria pollutants within the district, SCAQMD also has a general responsibility pursuant to the Health and Safety Code, §41700, to control emissions of air contaminants and prevent endangerment to public health. As a result, over the last few years the SCAQMD has regulated pollutants other than criteria pollutants such as TACs, greenhouse gases, and stratospheric ozone depleting compounds. The SCAQMD has developed a number of rules to control non-criteria pollutants from both new and existing stationary

sources. These rules originated through state directives, CAA requirements, or the SCAQMD rulemaking process. Table 3-3 presents the estimated toxic emissions for selected compounds by source category.

TABLE 3-3

1998 Annual Average Daily Toxic Emissions for the South Coast Air Basin (lbs/day)

Pollutant	On-Road	Off-Road	Point	AB2588	Area	Total
Acetaldehyde[a]	5485.8	5770.3	33.9	57.1	189.1	11536.2
Acetone[b]	4945.8	4824.7	3543.5	531.4	23447.4	37292.8
Benzene	21945.5	6533.4	217.7	266.8	2495.4	31458.8
Butadiene [1,3]	4033.8	1566.1	6.7	2.0	151.3	5759.9
Carbon tetrachloride	0.0	0.0	8.8	1.8	0.0	10.6
Chloroform	0.0	0.0	0.0	35.5	0.0	35.5
Dichloroethane [1,1]	0.0	0.0	0.0	0.1	0.0	0.1
Dioxane [1,4]	0.0	0.0	0.0	105.0	0.0	105.0
Ethylene dibromide	0.0	0.0	0.0	0.2	0.0	0.2
Ethylene dichloride	0.0	0.0	4.9	17.6	0.0	22.5
Ehtylene oxide	0.0	0.0	58.1	12.3	454.1	524.4
Formaldehyde*	16664.9	16499.3	521.6	674.7	1107.5	35468.0
Methyl ethyl ketone*	905.1	906.9	3240.2	385.9	14535.4	19973.5
Methylene chloride	0.0	0.0	1378.6	1673.6	9421.7	12473.9
MTBE	58428.9	2679.2	40.5	434.4	5473.7	67056.7
p-Dichlorobenzene	0.0	0.0	0.0	4.5	3735.6	3740.1
Perchloroethylene	0.0	0.0	4622.0	2249.1	22813.1	29684.2
Propylene oxide	0.0	0.0	0.0	22.3	0.0	22.3
Styrene	1114.8	287.1	447.0	3836.7	21.4	5707.0
Toluene	63187.6	11085.9	5689.6	3682.4	52246.7	135892.2
Trichloroethylene	0.0	0.0	1.1	58.0	2550.3	2609.3
Vinyl	0.0	0.0	0.0	4.3	0.0	4.3
Arsenic	0.1	0.3	2.7	0.7	21.4	25.2
Cadmium	1.6	1.5	0.5	0.7	27.5	31.8
Chromium	2.4	2.3	3.9	2.2	302.2	313.0
Diesel particulate	23906.3	22386.3	0.0	5.4	815.3	47113.4
Elemental carbon[c]	27572.1	6690.3	702.8	0.0	16770.5	51735.7
Hexavalent chromium	0.4	0.4	0.3	1.0	0.1	2.2
Lead	0.7	0.9	1.9	24.5	1016.3	1044.3
Nickel	2.5	2.2	2.9	21.6	85.6	114.9
Organic carbon	16426.2	15381.8	0.0	0.0	108612.1	140420.2
Selenium	0.1	0.1	3.0	5.7	2.6	11.6
Silicon[b]	68.6	67.6	167.2	0.0	248614.0	248917.4

Source: Final Report MATES II Study, SCAQMD (March, 2000).

* Primarily emitted emissions. These materials are also formed in the atmosphere as a result of photochemical reactions.

[b] Acetone and silicon are not toxic compounds. Their emissions are included here because they were measured in the sampling program and were subsequently modeled for the purpose of model evaluation.

[c] Includes elemental carbon from all sources (including diesel particulate).

Health Effects from Toxic Air Contaminants

Cancer Risk

When "carcinogenic risk" is discussed, it typically refers to the increased probability that an individual exposed to an average air concentration of a chemical will develop cancer when exposed over 70 years. Cancer risks are often expressed on a per-million basis for comparative purposes. As an example, a cancer risk of 100 in a million at a location means that the individuals staying at that location for 70 years have a 100 in a million chance of contracting cancer.

Health statistics show that one in four people will contract cancer over their lifetime, or 250,000 in a million, from all causes, including diet, genetic factors and lifestyle choices.

One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen poses some risk of causing cancer. It is currently estimated that about one in four deaths in the United States is attributable to cancer. About two percent of cancer deaths in the United States may be attributable to environmental pollution (Doll and Peto, 1981).

Noncancer Health Risks

It is only relatively recently that regulatory agencies have begun to address TACs that are associated with health effects other than cancer (e.g., birth defects, reproductive problems, genetic mutations, etc.). A preliminary study by

USEPA found that exposures to TACs have a significant potential to cause adverse noncancer health impacts (USEPA, 1990). The study found that of 150 chemicals for which health data and quantitative exposure data were available, about half exceeded relative exposure levels (RELs) at numerous sites throughout the country. The study also found that exposure to chemical mixtures may result in adverse noncancer health risks that might not be predicted if only the impacts of individual pollutants are considered.

Unlike carcinogens, for most noncarcinogens it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The CaLEPA and OEHHA develop RELs for TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

A "cancer burden" typically refers to the number of excess cancer cases expected in the exposed population. If 10,000 people live at that location, then the cancer burden for this population will be one (the population multiplied by the cancer risk). This means that one of the 10,000 people staying at the location for 70 years is estimated to contract cancer.

Multiple Air Toxics Exposure Study II (MATES II) Study

The MATES II study, which is the most comprehensive study of urban toxic air pollution ever undertaken, shows

that motor vehicles and other mobile sources of air pollution are the predominant source of cancer-causing air pollutants in the Southland. The SCAQMD's Governing Board directed staff to undertake the MATES II study as part of the agency's environmental justice initiatives (e.g., EJ Initiative #7) adopted in late 1997. A panel of scientists from universities, an environmental group, businesses and other government agencies helped design and guide the study. The study was aimed at determining the cancer risk from toxic air pollution throughout the area by monitoring toxics continually for one year at 10 fixed-monitoring sites. Another goal was to determine if there were any sites where concentrations of industry were causing a disproportionate cancer burden on surrounding communities. To do so, the SCAQMD monitored toxic pollutants at 14 sites for one month each with three mobile monitors. Although no such sites were identified, models show that elevated levels can occur very close to facilities emitting toxic pollutants. Monitoring platforms were placed in or near residential areas adjacent to clusters of facilities.

In the MATES II study, SCAQMD monitored more than 30 toxic air pollutants at 24 sites (10 fixed and 14 temporary) over a one-year period in the spring of 1999. The SCAQMD collected more than 4,500 air samples and together with the California Air Resources Board performed more than 45,000 separate laboratory analyses of these samples. A similar study known as MATES I was conducted in 1986 and 1987. In each study, SCAQMD calculated cancer risk assuming 70 years of continuous exposure to monitored levels of pollutants.

The MATES II study found that the average carcinogenic risk in the Basin is about 1,400 in one million (1400 x 10-6). Mobile sources (e.g., cars, trucks, trains, ships, aircraft,

etc.) represent the greatest contributors. As shown in Figure 3-1, about 70 percent of all risk is attributed to diesel particulate emissions; about 20 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde); about 10 percent of all risk is attributed to stationary sources (which include industries and other certain businesses such as dry cleaners and chrome plating operations.)

* * *

FINAL REPORT

Multiple Air Toxics Exposure Study in the South Coast Air Basin

MATES-II

MARCH 2000

[LOGO] South Coast Air Quality Management District

21865 E. Copley Drive
Diamond Bar, CA 91765-2079

Executive Summary

The Multiple Air Toxics Exposure Study (MATES-II) is a landmark urban toxics monitoring and evaluation study conducted for the South Coast Air Basin (Basin). The study was initiated as part of the Environmental Justice Initiatives adopted by the South Coast Air Quality Management District (District) Governing Board in October 1997. The study represents one of the most comprehensive air toxics programs ever conducted in an urban environment, and certainly much more comprehensive than a similar study (MATES-I) conducted by the District over a decade ago.

The MATES-II project consists of several elements. It consists of a comprehensive monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to fully characterize Basin risk.

There were two separate monitoring components to MATES-II: (1) a network of 10 fixed sites which monitored for toxic air contaminants once every six days for an entire

year (from April 1998 through March 1999); and (2) a microscale study which utilized three mobile platforms to sample at 14 additional communities. The microscale study specifically targeted residential areas which could be influenced by nearby sources of toxic emissions. In order to cover all these locations in a one-year period, the sampling platforms were situated in a community for a one-month period. For the entire program, both fixed and microscale sites, over 4,500 samples were collected and analyzed. Due to the large number of samples, laboratories at both the District and the California Air Resources Board (ARB) shared responsibilities for the chemical analyses.

In addition to the monitoring portion, MATES-II also included an update of the latest toxics emissions inventories for the Basin, and computer modeling to determine a more complete picture of toxics risks. Since it is not feasible to conduct sampling at each and every location in the Basin, it is important to utilize the models to provide predictions for locations where monitoring has not been possible. (It should be noted that the costs for this program are over $750,000, not counting the in-kind services provided by the ARB.)

To provide important scientific guidance to the District during the study, the Air Toxics Study Technical Review Group (ATSTRG) was formed. This panel of 13 experts from academia, environmental groups, industry, and public agencies, representing expertise in air toxics, was assembled to review the project from inception, and to offer guidance on ways to improve the study. The program design reflected, to a large extent, the input provided by this panel.

In the monitoring program, over 30 air pollutants were measured. (Table ES-1). These included both gas and particulates. Toxic air contaminants are determined by the

U.S. EPA, and by the California EPA, including the Office of Environmental Health Hazard Assessment and the ARB. For purposes of this study, the California toxic risk factors are used.

Table ES-1

Pollutants Measured in MATES-II

CAS No.	Chemical Name	CAS No.	Chemical Name
71432	Benzene	50000	Formaldehyde
7440439	1,3 Butadiene	75070	Acetaldehyde
106467	Dichlorobenzene (ortho- & para)		Acetone
75014	Vinyl Chloride	7440382	Arsenic
10414	Ethyl Benzene		Chromium
	Toluene	7439921	Lead
	Xylene (m-, p-, o-)	7440020	Nickel
	Styrene		Cobalt
56235	Carbon Tetrachloride		Copper
67663	Chloroform		Manganese
75343	Dichloroethane [1,1]	7723140	Phosphorous
	Dichloroethane [1,1]		Selenium
75092	Methylene Chloride		Silica
127184	Perchloroethylene		Silver
79016	Trichloroethylene		Zinc
74783	Chloromethane		PAHs
			Elemental Carbon
			Organic Carbon

Toxic measurements in the Basin are not new. Although MATES-II represents the most comprehensive study of its kind, the ARB has collected samples at five sites in the Basin since 1990. As a background to the current study, an evaluation of the trends of key toxic pollutants was conducted. Data from all sites have shown a pronounced decrease in toxic levels in the Basin from 1990 through 1997. In fact, the risk associated with cancer rates (often referred to as "carcinogenic risk") associated with air toxics has decreased by about 50 percent during this period.

When "carcinogenic risk" is discussed, it typically refers to the increased probability that an individual exposed to an average air concentration of a chemical will develop cancer when exposed over 70 years. Cancer risks are often expressed on a per-million basis for comparative purposes. As an example, a cancer risk of 100 in a million at a location means that the individuals staying at that location for 70 years have a 100 in a million chance of contracting cancer.

A "cancer burden" typically refers to the number of excess cancer cases expected in the exposed population. If 10,000 people live at that location, then the cancer burden for this population will be one (the population multiplied by the cancer risk). This means that one of the 10,000 people staying at the location for 70 years is estimated to contract cancer.

To make carcinogenic risk determinations, at least one full year of data is strongly recommended to represent exposure potential. This is why the fixed site network (or "regional study") was conducted over a one-year period. The microscale study, on the other hand, is intended more

to determine whether localized sources of emissions cause a significant increase in concentration of certain toxic air contaminants. Data collected at these sites cannot readily be expressed in terms of risk because only one month of data is available at 12 of the 14 microscale sites. (At two sites, sampling was conducted for one month during each calendar quarter.) Localized conditions can be assessed, however, by comparing the toxic levels at each microscale site to its nearest station in the fixed-site network. Where differences occur the microscale influences of nearby sources can be estimated. To further complement this assessment, microscale-level modeling has been included in this study, as well as an enhanced toxics inventory in the immediate vicinity of each microscale site. These efforts, combined, provide a mechanism for both regional-scale and local-scale air toxic characterizations across the Basin.

Consistent with the fact that most of the region's population and toxic-emitting sources are within Los Angeles County, most of the monitoring sites were placed in Los Angeles County. Of the 10 fixed sites, seven were in Los Angeles County, and one each in the other three counties of the Basin. Because fixed sites are situated based on EPA guidelines for "neighborhood scale" monitoring, each of the ten locations may be representative of adjacent communities as well. Microscale sites, on the other hand, were specifically located to characterize localized conditions. For the 14 microscale sites, eight were in Los Angeles County and two in each of the other three counties. (See Figure ES-1.) Unlike reactive pollutants, such as ozone and fine particulates which increase in concentration as the wind carries its precursor emissions inland,

many toxic pollutants are non-reactive. This means that highest levels are expected to be close to the sources.

The key results of the MATES-II study are as follows;

Fixed-Site (Regional) Program

A. Monitoring

1) The carcinogenic risk in the Basin is about 1,400 per million people*. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributor. About 70% of all risk is attributed to diesel particulate emissions; about 20% to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde); about 10% of all risk is attributed to stationary sources (which include industries and other certain businesses such as dry cleaners and chrome plating operations.) (See Figure ES-2.)

2) The carcinogenic risk of 1,400 per million is based on a range from about 1,120 in a million to about 1,740 in a million among the ten sites. (See Figure ES-3, top.)

* Based on the average of the pollutant concentrations measured at the fixed monitoring sites.

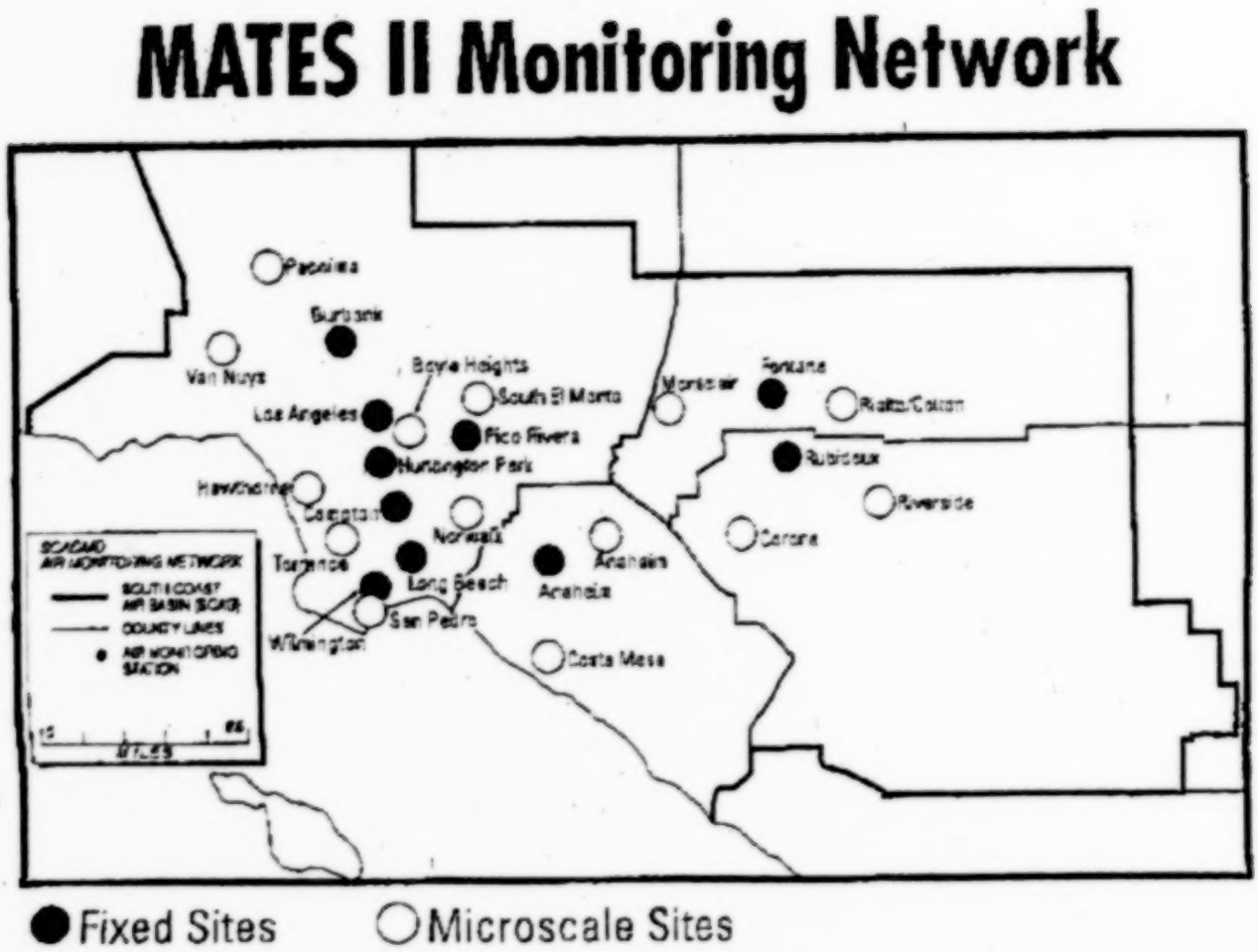


Figure ES-1. Map of MATES - II Monitoring Locations

3) The sites with the greatest risk levels were in the south-central and east-central portions of Los Angeles County. At these locations, the dominance of mobile sources is even greater than at other sites. The sites with the lower risk levels were mostly in the other three counties. (See Figure ES-3, top and middle.)

4) The differences in carcinogenic risk from one site to another are much more driven by the influence from mobile sources than from stationary sources. (See Figure ES-3, top and middle.)

5) The carcinogenic risk from one site to another, as ascribed to stationary sources, is rather uniform across the Basin. In this respect, there is not much difference among the four county sites. (See Figure ES-3, bottom.)

6) There are strong seasonal variations to the levels of toxic air contaminants, primarily with those pollutants associated with mobile sources. Elemental carbon (a surrogate for diesel particulates), benzene, and butadiene – all have seasonal peaks in the late fall and winter months. Lowest levels are observed during the spring and summer months. (See Figure ES-4, top.)

7) The seasonal variations with respect to toxic air contaminants from stationary sources are generally small. Levels are quite consistent across all months of the year. (See Figure ES-4, bottom.)

8) Levels of risk are, for the most part, consistent with the long-term downward trends evident in the ARB data since 1990. Noticeable improvements have occurred for three major elements of toxic risk: hexavalent chromium, benzene, and butadiene. (Note: trends for diesel particulates are not available from the ARB data, however,

elemental carbon trends recently reported by Christoforou, et al., (2000) indicate a decrease of about 32% from the early 1980's to the early 1990's.)

B. Modeling

1) Model results show similar levels of carcinogenic risk across the Basin as does the monitoring data. Models also show the strong domination of mobile sources contributing to risk.

2) The model results, which are more complete in describing risk levels across the Basin than is possible with the monitored data, show that the higher risk levels occur in the south-central Los Angeles area, in the harbor area, and near freeways. (See Figure ES-5.)

3) Results suggest that the basinwide cancer risk level may be 16 percent lower than the corresponding risk levels estimated from the monitoring sites.

4) Results show that the higher pollutant concentrations generally occur near their emission sources.

5) Models generally underestimate measured values. It is estimated that model performance would improve with the latest versions of the mobile source emission models provided by the California Air Resources Board.

Microscale Program

1) With few exceptions, the monitoring at each of the 14 microscale sites did not register significantly higher levels of any toxic air contaminants.

However, it cannot be concluded that "hot spots" do not exist at other locations.

2) Significantly higher levels of styrene (not currently assigned a carcinogenic risk factor, but a pollutant which was measured as part of the laboratory analysis) was observed at the Anaheim microscale site. This finding is corroborated by an examination of local emissions inventories which found three facilities that emit styrene to be close to the monitoring site. This illustrates that local "hot spots" do occur.

3) Significantly higher levels of formaldehyde were measured at the San Pedro microscale site. The nature of the measurements, showing decreasing levels of formaldehyde over time, and insensitivity of such levels to changes in wind directions, suggest an instrument contamination problem as the cause for this observation.

4) Even at microscale sites, the risk impacts are dominated more by mobile sources than by stationary sources. For only two sites (Torrance and Costa Mesa) are stationary sources more dominant than mobile sources. At these sites, they do not necessarily have higher stationary source emissions, rather there is a noticeable decrease in the levels of toxic air contaminants from mobile sources.

5) Levels of toxic air contaminants associated with stationary source emissions are reasonably uniform among the microscale sites, consistent with the findings from the fixed site locations.

6) Facility-based modeling conducted as part of the permitting process shows that highest levels of toxic air contaminants can occur very close to the fence-line of facilities. Due to logistical constraints

in placing mobile monitoring platforms, locations other than where the microscale platforms were located could therefore have higher levels than at the microscale monitoring sites.

Caveats and Risk Uncertainty

1) There is currently no technique to directly measure diesel particulates, the major contributor to basinwide carcinogenic risk. Based on research results as reported by ARB, diesel particulates can be estimated by measuring elemental carbon, a black, sooty particulate. In essence, elemental carbon becomes a surrogate for diesel particulates. Although this estimating technique is likely to have uncertainties, the emissions inventory and modeling, which account for directly emitted diesel particulates, confirm that diesel particulates are the major contributor to carcinogenic risk.

2) The determination of risk values for each compound carries a level of uncertainty, which, for some pollutants, is large. Typically, the risk values are derived from animal or epidemiological studies of exposed workers or other populations. Uncertainty occurs from the application of individual results to the general population. When risk factors for specific compounds are determined, levels are usually established conservatively. There is considerable debate on appropriate risk values, and often the levels established by the USEPA and CalEPA differ. For the purpose of this study, California values are used.

3) There is further debate as to the appropriate levels of risk ascribed to diesel particulates. CalEPA, in recommending a cancer risk level of 300 in a million per microgram per cubic meter (ug/m^3) of diesel particulates, considered evidence

which suggested diesel risks as low as 150 in a million to as high as 2400 in a million per ug/m^3. The USEPA has not yet declared diesel particulates as a toxic air contaminant. Thus, the selection of a risk factor for diesel particulates can have a substantial effect in assessing overall risks; however, even using the lowest bound of the CalEPA-recommended risk factor (150 in a million) does not change diesel's domination in the overall risks. For purposes of this study, and to be consistent with the approaches used for other toxic pollutants, the CalEPA recommended value of 300 in a million per ug/m^3 is used.

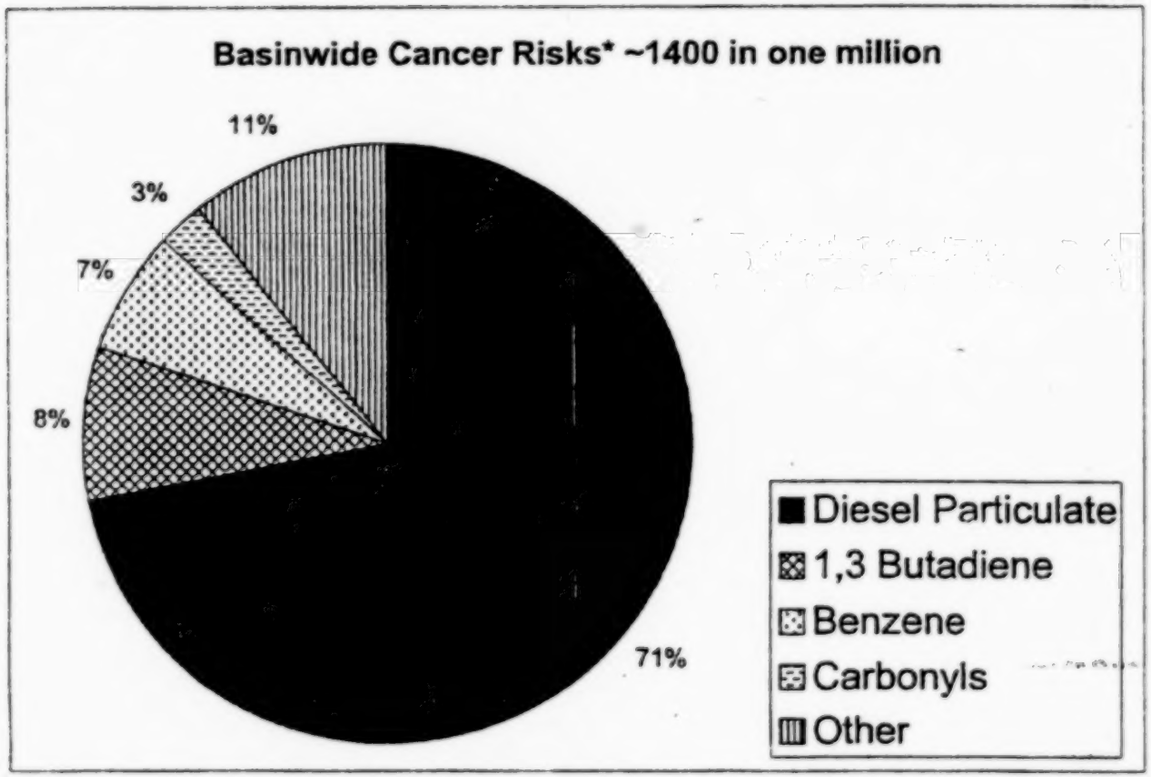
4) There is an estimated uncertainty level of + 25 percent associated with laboratory measurements of many toxic compounds. Part of this uncertainty is attributed to the fact that many of the toxic compounds measured are at extremely low concentration levels, at parts per billion (ppb) levels, and often near the detection limits of the instrumentation. A number of compounds cannot be detected at all. When non-detections occur, it is assumed that the actual levels are not zero, but are half of the instrument detection limit. In other words, if the detection limit is 1 ppb, and a compound is not detected at that level, it is assumed that the actual concentration is one-half of 1 ppb. This convention has been in use by the Air Resources Board since the reporting of monitored toxics in the state commenced in 1990. This convention allows the vast majority of the data users to statistically manage the data. Other methods of handling non-detects are often difficult to implement or offer no practical advantage. The method is a conservative one that protects the public when analytical shortcomings cannot address real emissions that are known to exist. Although this

convention is not in regulation form, it is considered at this time to be the best available tool for addressing concentrations of pollutants where current laboratory technologies cannot yet detect such low levels, and at the same time treating public safety concerns. As a sensitivity test, it was assumed that non-detect values were zero for those pollutants which had a predominance of non-detections. Under such an assumption, the overall risk values would have been lowered by 4.6%.

* * *

Figure ES-2

Major Pollutants Contributing to Cancer Risk
In the South Coast Air Basin



*Based on the average of the pollutant concentrations measured at the fixed monitoring sites.